“A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON ANXIETY AND DEPRESSION AMONG PATIENTS SUBJECTED TO PTCA AND THEIR SPOUSES AT KMCH, COIMBATORE”.

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A DISSERTATION SUBMITTED TO THE TAMILNADU
Dr. M.G.R MEDICAL UNIVERSITY, CHENNAI, IN
PARTIAL FULFILMENT OF REQUIREMENT
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CERTIFICATE

This is to certify that the Dissertation entitled ***A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON ANXIETY AND DEPRESSION AMONG PATIENTS SUBJECTED TO PTCA AND THEIR SPOUSES AT KMCH, COIMBATORE,*** *is submitted to the faculty of Nursing* ***The Tamil Nadu Dr. M.G.R Medical University, Chennai*** *by* ***MS. ASHITHA CHANDRAN*** *in partial fulfillment of requirement for the degree of Master of Science in Nursing. It is the Bonafide work done by her and the conclusions are her own. It is further certified that this dissertation or any part thereof has not formed the basis for award of any degree, diploma or similar titles.*

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2	**WHO-**World Health Organisation
3	**CAD** – Coronary Artery Disease
4	**PTCA** – Percutaneous Transluminal Coronary Angioplasty
5	**PCI –** Percutaneous Coronary Intervention
6	**CABG –** Coronary Artery bypass Graft

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CHAPTER I

INTRODUCTION

"Heart disease is a disease of ignorance"

-Edwin

The vital organs are the internal organs of the human body necessary to maintain life. The major vital organs are brain, heart, lungs, kidneys and liver. Among this heart is the most important vital organ. Human heart is a pear shaped structure about the size of a fist. It is responsible for supplying oxygenated blood all over the body.

The most common cause of premature death in India is Coronary heart disease (CHD). Coronary blood vessels are the vessels which carry the blood towards the heart muscle. It is the term used to explain the effects of a reduction or complete obstruction of the blood flow and oxygen transport through the coronary arteries. Coronary Artery Disease (CAD) is manifested as myocardial infarction, silent ischemia, angina, arrhythmias, heart failure and sudden death. Atherosclerosis is an abnormal accumulation of lipid, or fatty substances in the coronary blood vessel wall. The trouble of coronary heart disease on patients, their spouses, families, loved ones and society as a whole is considerable .It is thought to be largely preventable disease, with key modifiable risk factors which include obesity, physically inactive life style, improper diet, elevated cholesterol, excess salt, alcohol intake, smoking, diabetes and hypertension.

The major cause of mortality and morbidity in the world is CAD (American Heart Association, 2004). The primary cause of death in the world is ischemic heart disease. In 2007 CHD caused 16.5 million deaths in the world and estimated to increase by 25 million annually (WHO, 2007).American Heart Association estimates that 1.2 million Americans will have myocardial infarction annually and about one fourth of these will expire in an emergency department or before reaching hospital. The mortality rate from myocardial infarction has decreased by 26.3% between 1999 and 2004 due to advance technology in the treatment.

Number one cause of death in the world is heart disease. In India incidence rate is high. In 1990 there were an estimated 1.17 million deaths from Coronary Artery Disease (CAD). In

2020 AD 2.6 million Indians are predicted to die due to CAD which constitutes 54.1% of Cardio Vascular Deaths. It is predicted that by 2010 India's population will suffer approximately 60% of the world's heart disease. The incidence of heart disease doubled in the last twenty years. Medical and public health professionals expect that 30% to 60% increase in the disease for males and females in developed countries and in developing countries; there will be 137% and 120%, respectively.

Treatment modalities of CAD include medical therapy, invasive interventional procedures and coronary artery bypass graft. Invasive interventional procedures to treat CAD are Percutaneous Transluminal Coronary Angioplasty (PTCA), intracoronary stent implantation, brachy therapy, atherectomy, and transmyocardial laser revascularization. Percutaneous Coronary Intervention (PCI) which is commonly known as coronary angioplasty is used to treat the narrowed coronary arteries of the heart by the insertion of balloon tipped catheter. PTCA becomes a standard technique in cardiology, offering some patients a real alternative to conventional coronary artery bypass graft. Initially this technique was applied to single vessel disease but multi vessel dilatation is now common. Morbidity, cost and days of hospitalization is lower in PTCA compared to Coronary Artery Bypass Graft (CABG).

PTCA began with the work of Dotter and Judkins in 1964.During 1970 s Gruntzig, Senning and Seigenthaker developed a mini balloon catheter system and performed first human PTCA in September 1977 at Zunch, Switser land.

Almost two million angioplasties were performed worldwide in 2005, with an estimated increase of 8% annually. In 2005 -2006 Germany had the world’s highest PTCA procedural rate with 225,000, China had 95,912 and India had 42,123.The British Heart Foundation identified that in worldwide there is a 12% increment in the number of percutaneous angioplasty between 2004-2005. In 2006, 1.313 million PCI procedures were performed in the United States. In KMCH about 450 cases per year.

This invasive interventional procedure is carried out in the cardiac catheterization laboratory. Angioplasty procedure usually consists of physician, physician assistants, cardiac invasive specialists, nurses and radiological technologists. Coronary arteries are examined by

angiography. It helps the cardiologist to decide whether it is appropriate to proceed with angioplasty or to consider other treatment options such as stenting, atherectomy, medications or surgery. Hollow catheters called sheaths, are inserted into the artery of the groin(femoral artery) or arm(radial or brachial artery).X- ray angiogram or movie of the heart and blood vessels are obtained while an iodine containing colorless dye or contrast material is injected through the catheter. The location, extent and calcification of atheromo are verified. A long flexible soft plastic tube called a guiding catheter is passed through this sheath. When the catheter is properly positioned across the lesion or blockage, the balloon is inflated and a steady or oscillating pressure is maintained within the balloon. The balloon is inflated to a certain pressure for several seconds to compress the plaque and then deflated.

Angioplasty restores blood flow and relieves symptoms due to ischaemia in over 90% of patients. The success rate is more than 95%. It is a safe procedure and carried out all over the world both in developed and developing countries Death during an angioplasty procedure is usually less than 1%. The risk of other serious complications are estimated to be less than 1 to 2%.

NEED FOR THE STUDY

One of the most common diseases affecting the adult population is CAD. The prevalence of CAD in India was estimated to be 3-4% in rural areas and 8-10% in urban areas with a total of 29.8 million affected according to population based cross sectional surveys in 2007.

Anxiety and stress are very common in patients undergoing any invasive procedures. It is necessary to give adequate information to the patients in order to minimize levels of anxiety and stress to this invasive procedure. It has been noted that pre-procedural psychological preparation reduces hospital-induced anxiety. PTCA is an invasive diagnostic investigation that may result in high level of fear of unknown among cardiac patients. Unrelieved anxiety and stress can cause serious problems for patients. There have been reports that PTCA is stressful and fearful procedure which could aggravate high level of anxiety before and after the procedure.

Anxiety and depression are the two psychological variables which will negatively influence during recovery period after a cardiac event. Anxiety is defined as ‘’the feeling of

being very worried about something that may happen or may have happened, so that you think about it all time'' (www.logman.com/dictionaries). Depression is defined as "feeling of sadness that makes you think there is no hope for future" (www.logman.com/dictionaries).Patients with more anxiety and depression have worse long term psychological outcomes and poor quality of life. Studies have documented a three to six fold increased risk of Myocardial Infarction and sudden cardiac death among highly anxious patients.

Anxiety is common, more than depression, among persons with chronic cardiovascular disease and among those coping with recovery from acute cardiac events or interventions. The prevalence of anxiety is high at approximately 70% to 80% among patients who have experienced an acute cardiac event; anxiety persists over the long term in about 20% to 25% of patients with cardiovascular disease. Even among patients who have diagnosed cardiovascular disease without an acute event or required intervention, the prevalence of anxiety is about 20% to 25%. Even though anxiety is an expected and even normal reaction to an acute cardiac event or the anxiety that is persistent or extreme is not normal and has negative consequences for patient's health.

CAD causes more deaths, economical and social problems and disability in industrialized nations than any other group of diseases (Gresh et al. 2002). M.Higgins et al. (2003) found that the patients subjected to PTCA have anxiety related to fear of the unknown. In this study, coping measures initiated include confidence in the skill of the doctor, getting knowledge about the angioplasty procedure and support from the family and friends. Latif et al.(2002) said that the low level of anxiety and depression among patients subjected to PTCA and family members, could be due to the adequate facilities, adequate information provided by the physician, nurses and cardiac technician.

As with many interventional procedures there is evidence that pre-procedure education reduces anxiety and depression and leads to better outcomes and quality of life among patients and their spouses. (Tooth et al. 1998, Jowett & Thompson 2003).Pre-procedure cardiac education may also be helpful in addressing risk factors and life style modifications in such patients and may decrease readmission rates, recurrence of problems and improves post-discharge quality of life (Jowett & Thompson(2003), Dendale et al. 2005). However, patients

remain in contact with health professionals before and after interventions are becoming increasingly short and nurses have very little time to address the huge topic of cardiac rehabilitation. As a result, patients often find it difficult to understand the information they are given (Taira et al. 2000). Short hospital stay requires good planning in order to meet patient teaching outcomes and their needs. Wilson – Barnett (1995) states that: giving the right information reduces anxiety and also aids a rapid adjustment to stressful events.

The stress, tensions and anxiety caused by illness, admission to hospital and invasive procedures produce an imbalance in homeostasis which presents as psychological and physiological distress. This has been shown by Boore (1998) to impair or impede recovery. However she also demonstrated that providing adequate preprocedural information can promote a more rapid recovery.

Several studies have proven psychosocial function attribute and link to the increment of coronary heart disease risks and complications (Donald, 2001).The adaptation and defense mechanisms to anxiety and depression among CHD varies (Kulik et al.1993).Higher anxiety and stress level among the CHD patients would worsen depression (Thompson et al. 2004).The normal psychological responses to stress are an elevation of the heart rate, decreased oxygen supply to tissue, impaired tissue perfusion to all organs , electrolytes and hormonal imbalance. These psychological changes would increase demand for oxygen utilization, ischemic chest pain, arrhythmia, decreased tissue perfusion and sudden cardiac death among coronary heart disease patients (Enickslank et al. 2000).

The use of informative video teaching in cardiology departments proves to be highly recommended instrument to lower anxiety and stress levels and increases considerably the level of satisfaction from the received information. Video assisted teaching is an effective method for decreasing anxiety and stress in patients and their spouses and it can be introduced by nurses and physicians during pre-procedure care. This intervention is beneficial before the procedure. After PTCA, patients fear seems to be focusing on daily routines, modifications in their normal life, procedures, procedural pain, complications, recurrence of the problem, deteriorating health status, uncertainty about heart disease and recovery. Preparatory information before an invasive procedure has positive effects on recovery, wellbeing and anxiety.

Depression is a normal phenomena expressed by the Coronary Artery Patients, particularly if anxiety level is unrelieved and undetected (Lane & Mahler 2002, Jowett et al.2003). Depression is more common among patients with CAD than in those without CAD; with ≥20% of hospitalized patients after Acute Myocardial Infarction. Depression is expressed by mood disturbances ranging from mild to severe. The cardinal symptoms are persistently pervasive, low mood and loss of interest or pleasure in usual activities (Leonard et al.2004).Depression may be due to poor quality of life and higher health care costs. CAD patients with anxiety and depression may have higher chance of re-infarction, rehospitalization, morbidity and mortality due to complications (Leonard et al.2004).

Gulanick et al. (1997) conducted a study in which, psychological experiences among PTCA patients were examined. The findings from focus group interviews, comprising twenty six males and nineteen females, revealed that most patient's experiences were largely negative; many of them expressed only minimal satisfaction regarding several aspects of their care. Gulanick et al. (1998) followed their earlier study with more focus group data and showed that post-PTCA patients were making lifestyle changes, but with more difficulty. They found that patients acknowledged both acceptance and uncertainty about the future. Some participants had adopted coping with uncertainty while others were fearful of an early death. Among those who had attempted lifestyle changes both satisfaction and frustration with their modifications were highlighted. Helping the patients, set realistic expectations in terms of procedural outcomes and lifestyle modification is an important part of patient education and health promotion.

Sader et al. (2002) showed that PCI patients have more emotional problems than Coronary Artery Bypass Graft (CABG) patients. Patients undergoing PCI have substantial emotional and spiritual distress that may leads to procedural complications. Patient who undergoes PCI needs more informational or emotional support. It is a challenging task for the health professional to provide adequate information within a short period of time since the patient who undergoes PCI has a shorter hospital stay. Computer assisted teaching will help the health professionals to provide adequate information in an effective way, within a short period of time.

An efficient nurse should make the patient feel that everything is under control by giving him confidence. Teasly .D (1999), found that the nurse needs to encourage compliance by carefully explaining what he will experience before, during and after the procedure and that this information could take the edge off the patient's anxiety.

Spouses of the patients who had undergone PTCA feel uncertain due to financial problems, emotional disturbances due to disease caused changes and fears about new Myocardial Infarction. It is an important nursing step to identify the needs of patients and spouses following an acute cardiac event to facilitate couples psychosocial adaptation .It are very essential to provide adequate information to the spouses because they have a new role and duty in the family. They need to monitor and manage minor symptoms, also need to take care of the patients physically, understand their emotions and support them collaboratively.

Hence the investigator realized the need to conduct a study to evaluate the effect of patient's education by video on levels of anxiety and depression of patients undergoing coronary angioplasty and their spouses. Preprocedural information on their illness, reasons for hospitalization, the things which they have to follow before and after the procedure and lifestyle modifications will be explained. Dr Campbull .M explored the self reported changes in coronary risk factors by patients three to nine months following coronary artery angioplasty and severity of their condition. Majority of patients had altered their lifestyle and try to reduce at least one risk factor,40% of patients in their study had recurrence of chest pain and 42% believed their condition had been cured. Diet modification, increased exercise and stress reduction were the top their changes in the lifestyle reported. The findings suggested that there is a major need for health education and follow up for patients after coronary artery angioplasty. Adequate information will reduce the anxiety and fear among patients who undergoes PTCA and their spouses by providing relevant information on right time. Being aware of these common concerns, nurses can help the patients to fulfill his needs and facilitate his early discharge after the procedure.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of Video Assisted Teaching on Anxiety and Depression among patients subjected to PTCA and their spouses at KMCH, Coimbatore.

OBJECTIVES OF THE STUDY

Objectives of the study were to

1. assess the effectiveness of video assisted teaching on level of anxiety among patients subjected to PTCA and their spouses.
2. determine the effectiveness of video assisted teaching on depression among patients subjected to PTCA and their spouses .
3. associate anxiety and depression with selected demographic variables among patients subjected to PTCA.
4. associate anxiety and depression with selected demographic variables among spouses of patients subjected to PTCA.

OPERATIONAL DEFINITONS

EFFECTIVENESS

It is the desirable reduction in level of anxiety and depression brought about by video assisted teaching.

VIDEOASSISTED TEACHING

Video assisted teaching is a method of teaching by which information on anatomy and physiology of heart, risk factors and pathophysiology of Coronary Artery Disease, treatment modalities of CAD, PTCA procedure and life style modifications following PTCA are provided to the patients subjected to PTCA and their spouses with the help of video.

ANXIETY

Anxiety is an unpleasant emotional experience and is associated with feelings of uncertainty, uneasiness, tension and helplessness as measured by Zung Self Rating Anxiety Scale.

DEPRESSION

Depression is an unpleasure affect in which patient will be quiet, restrained, unhappy, pessimistic and will have a feeling of lassitude, inadequacy, discouragement and hopelessness as measured by Beck Depression Inventory- II.

PTCA

PTCA is an invasive treatment modality used to decompress the plaque and there by dilate the lumen of coronary artery through the insertion of a balloon tipped catheter.

SPOUSE

Male or female life partner of the patient.

HYPOTHESES

H1: There will be a significant difference in the level of anxiety among patients and their spouses those who receive video assisted teaching and those who do not receive.

H2: There will be a significant difference in depression among patients and their spouses those who receive video assisted teaching and those who do not receive.

ASSUMPTIONS

1. Any unknown procedure will cause anxiety.
2. Adequate information regarding the procedure will help to reduce the anxiety level.

CONCEPTUAL FRAME WORK.

This study is aimed to assess the effectiveness of video assisted teaching on anxiety and depression among patients subjected to PTCA and their spouses at KMCH, Coimbatore.

Conceptual framework of the present study was developed by the investigator based on Imogene King's Goal Attainment Model. The major elements of theory of goal attainment are seen "in the interpersonal systems in which two people, who are usually strangers, come together in a health care organization to help and be helped to maintain a state of health that permits functioning in roles".

From the theory of goal attainment, King has developed eight predictive propositions, although she indicates that additional propositions may be generated. The eight propositions that she sets forth are as follows:

1. If perceptual accuracy is present in nurse -client interactions, transactions will occur.
2. If nurse and client make transactions, goals will be attained.
3. If goals are attained satisfaction will occur.
4. If goals are attained effective nursing care will occur.
5. If transactions are made in nurse - client interactions, growth and development will be enhanced.
6. If role expectations and role performance are perceived by nurse and client are congruent, transaction will occur.
7. If role conflict is experienced by the nurse or client or both, stress in nurse- client interactions will occur.
8. If nurse with special knowledge and skills communicate appropriate information to the clients, mutual goal setting and goal attainment will occur.

This model focuses on interpersonal relationship between the client and the nurse, and this interaction is influenced by the perception of the nurse. This interaction leads to set mutual goals to attain the objectives. In the present study the interaction took place between the investigator and the patients subjected to angioplasty and their spouses.

Perception

Perception is “each person’s representation of reality”. In the present study anxiety and depression were perceived by the investigator, patient and their spouse.

Communication

Communication is defined as “a process whereby exchange of information from one person to another directly in face to face meetings or indirectly through telephone, television, or the written word”. Here investigator provides adequate information with help of video.

Judgment

After this perception investigator, patient and their spouses made mental judgements to achieve the goal. Investigator, patient and their spouses come together and make mutual goals.

Reaction

Investigator prepared a video assisted teaching on anatomy and physiology of heart, risk factors and pathophysiology of Coronary Artery Disease, , treatment modalities of Coronary Artery Disease, PTCA and life style modifications following PTCA are provided to reduce the anxiety and depression of the patients subjected to PTCA and their spouses. Investigator made arrangements for teaching sessions in an individualized manner.

Interaction

During the interaction, the investigator communicates with patient and their spouse. The investigator administered Zung Self Rating Anxiety Scale and Beck Depression Inventory -II to assess the anxiety and depression on the previous day of the PTCA procedure. Investigator provided psychological support to promote relaxation. After the collection of pretest information investigator communicate with the patient and their spouse regarding anatomy and physiology of heart, coronary artery disease, pathophysiology, risk factors, treatment modalities of Coronary Artery Disease, PTCA and life style modifications .With the aid of the visual package the patient, their spouse and the investigator entered into the transaction phase.

Transaction

Transactions are “the valuational components of the interaction can be observed in the form of goal attainment measures”. When transaction occurs between nurse, client and their spouse predetermined mutual goals were attained. This adequate information reduces the anxiety and depression of patients subjected to PTCA and their spouses than the control group.

Role

Role is defined as “a set of behaviors expected of persons occupying a position in a social system; rules that define rights and obligations in a position; a relationship with one or more individuals interacting in specific situations for a purpose”.

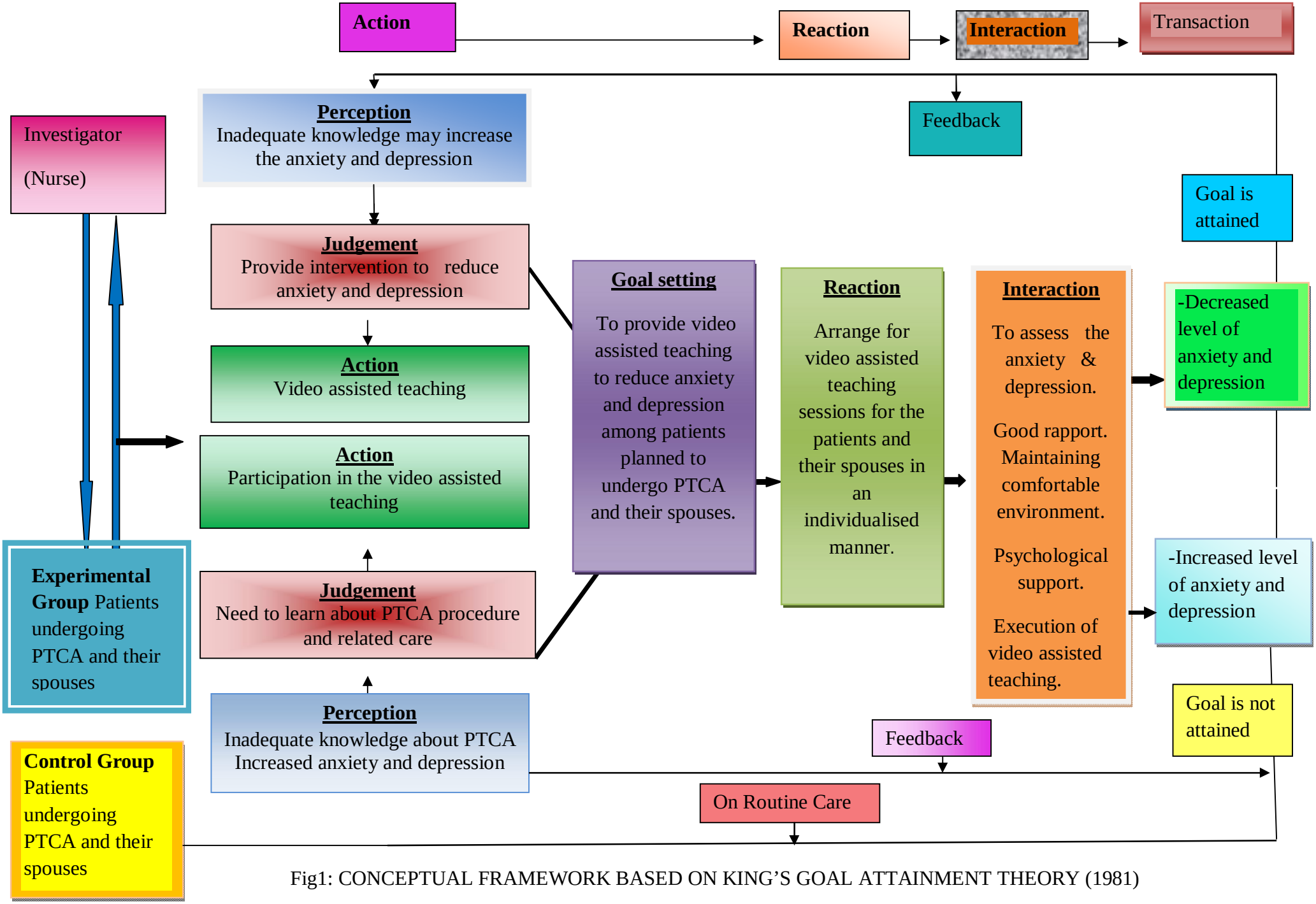

Fig1: CONCEPTUAL FRAMEWORK BASED ON KING'S GOAL ATTAINMENT THEORY (1981)

CHAPTER II

REVIEW OF LITERATURE

This chapter deals with the information collected from various sources in relation to the present study. Highly extensive, exhaustive and systematic review of relevant literature was done to collect maximum information for laying foundation for the present study.

Investigator reviewed books, cardiac and other journals, published and unpublished articles to collect relevant literature for the research work.

Review of literature is categorized as follows.

- Literature related to anxiety and depression of patients with Coronary Artery Disease.
- Literature related to anxiety and depression of patients subjected to PTCA and their spouses.
- Literature related to needs of patients subjected to PTCA and their spouses.
- Literature related to video assisted pre procedural information

Literature related to anxiety and depression of patients with Coronary Artery Disease.

Frasure Smith and colleagues (1995) found that 2.5-fold increase in risk for ischemic complications resulting from anxiety following MI, while a substudy from the Global Utilization of Streptokinase and Tissue Plasminogen Activator for Occluded Coronary Arteries (GUSTO) trial suggested that patients with acute MI had a high level of in-hospital anxiety and an almost 5-fold increase in risk for recurrent ischemia, reinfarction or death compared with patients with MI without high levels of anxiety. This study suggested that complications can be suspected among those anxious patients following Myocardial Infarction. As many of the adverse effects of anxiety seem to be related to Sudden Cardiac Death, attention has been given to abnormalities of cardiac rhythm. There is an increased incidence of QT interval prolongation in the electrocardiogram has been demonstrated among patients with anxiety, which may reflect a ventricular arrhythmia.

Barth et al (2004) stated that depressive symptoms and clinical depression have an unfavorable impact on mortality in CHD patients. Depressive symptoms increased the risk of mortality in CHD patients. The risk of depressed patients was dying in the 2 years after the initial assessment is two times higher than that of non depressed patient. Depressive disorders have no effect on mortality in the first six months. But the risk is more than two times higher, after two years for CHD patients with clinical depression.

Vural et al (2008) investigated the associations between coronary artery disease and symptoms of depression and anxiety, they conducted a prospective cross-sectional study among 314 patients (age range, 19–79 yr) who had presented with chest pain. The findings were classified into five categories based on Coronary angiography. The higher number indicated the higher symptoms. Beck depression and anxiety inventories were used to assess the anxiety and depression level. Woman patients had shown significantly higher depression and anxiety scores. They found that every one point increase in the depression score was associated with an average of 5% to 6% increase in abnormal coronary angiographic findings or definitive coronary artery disease. Those patients with the highest anxiety scores had slow coronary flow.

Literature related to anxiety and depression of patients subjected to PTCA and their spouses

Litrature related to anxiety

According to Lang and Hamilton (1994) patient anxiety appears to be a significant problem in invasive procedures. Inadequate information, poor treatment, pain and anxiety can cause cardiovascular strain and restlessness, which may affect the success of the procedure. On the other hand, pharmacologic over sedation [over-medication] can provoke respiratory and cardiovascular depression, thereby increasing the procedural risks and increase risks of complications.

Pederson et al (2008) conducted a study in which they examined different courses of anxiety symptoms over an 18-month period in post percutaneous coronary intervention. Consecutive exhausted PCI patients (n = 638), participating in the Exhaustion Intervention Trial (EXIT), were assessed for depression by using the Structured Clinical Interview for Diagnostic

and Statistical Manual of Mental Disorders. State Anxiety Scale procedure was used to examine courses of anxiety symptoms over an 18-month period. Anxiety trajectories varied across patients, Five trajectories were identified: nonanxious (13.2%), mildly anxious (39.7%), decreasingly anxious (11.6%), moderately anxious (29.3%), and severely anxious (6.3%), with four of them being stable over 18 months. In clinical practice, knowledge of these problems and their determinants may help to identify distinct groups of patients with potentially differential risks of adverse health outcomes.

Trotter et al (2010) determined the patterns of anxiety and concerns experienced by patients undergoing Percutaneous Coronary Interventions and the contributing factors in the time period surrounding PCI. A convenience sample of hundred patients undergoing PCI were recruited, and anxiety was measured using the Spielberger State Anxiety Inventory immediately before the PCI, the first day post procedure, and 1 week post discharge. Anxiety scores were highest pre-procedure and decreasing significantly by the post procedure time and further still by the post discharge time . The concerns patients identified most frequently and most important were the outcome of the PCI and the possibility of surgery, pre-procedure (37%) and post discharge (31%), and the limitations and discomfort arising from the access site wound and immobility post procedure (25%). The predictors of anxiety at the post discharge time were reporting their most important concern as the future progression of CAD and pre-procedural anxiety. Symptoms of anxiety were common among patients before PCI. Early detection of these symptoms are essential since it aggravates other cardiac complications.

Literature related to depression

Lehto et al (2000) identified the prevalence of depression at least 6 months after various coronary heart disease (CHD) events (bypass grafting, coronary angioplasty, myocardial infarction, and myocardial ischemia without infarction) and the associations between depression and clinical variables. 414 (284 males, 130 females) patients younger than 71 years were interviewed and examined. Depression was assessed by a self-rated depression scale. In the four diagnostic categories, one-sixth of the patients (14-19%) suffered from depression. Depression is very common after CHD events. Earlier identification and treatment of depression should be one of the important elements in the rehabilitation of cardiac patients.

Dudek et al (2007) investigated the spectrum and course of depressive symptoms in cardiac ischemic disease (CAD) patients before and after successful coronary angioplasty (PCI) in one year follow-up. 227 patients with CAD selected for PTCA were taken. 156 patients with clinically recovered and without restenosis within 4 weeks after the intervention were included in further analysis. Patient's condition was assessed four times (one day before and at 1, 6 and 12 months after the intervention.In 75 (48%) patients with mild and moderate depressive disorders had prevalence of non-specific somatic symptoms were observed one day before PTCA. Remaining 33 subjects had depressive symptoms one month after the PCI. Twelve patients (15%) developed depressive symptomatology, moreover in the group of patients who were free of depressive symptoms a day before PTCA. Depressive symptoms and depressive thinking (especially hopelessness) recognized 4 weeks after PTCA had a tendency to persist at 6 and 12 months. The tendency was to give importance to somatic symptoms and not given preference to the cognitive symptoms. The results of the study suggest that successful PCI is not an indicator in the improvement of depressive symptoms. Diagnosis of depression in CAD patients needs special care and attention, because of this tendency.

Literature related to anxiety and depression

Moser et al (2004) examined the spousal anxiety and depression in patient's psychosocial recovery after a cardiac event. 417 patient–spouse pairs were selected after the patient was hospitalized for either acute myocardial infarction or coronary revascularization. Spouse anxiety, depression, perceived control and coping mechanisms were associated with patient psychosocial adjustment to illness, even when patient anxiety and depression were kept constant. Patient's psychosocial adjustment to illness was worse when spouses were more anxious or depressed than patients, and it was best when patients were more anxious or depressed than spouses. In fact, many investigators and clinicians have suggested that positive support and coping mechanisms from a patient's spouse gives a successful recovery after a cardiac event and it stabilizes the patient's mind. Another variable in the psychosocial recovery is perceived control. Patients and spouses with higher levels of perceived control during patient's recovery from an acute cardiac event report better psychosocial outcomes. Spouses of cardiac patients report feelings of anxiety, fear, depression, helplessness, hopelessness, sleep and appetite disturbances, and inability to concentrate. This psychological distress can persist for months and may be related, in part, to

care giving demands and a decreased sense of perceived control related to the spouse's cardiac illness. Study suggested that patient's psychological recovery may be improved by enhancing spouse's emotional state. Decreasing spouse's anxiety and depression may a cost effective way to intervene to improve patient's psychological state. This study suggested that both spouses and patients to be evaluated for higher level of anxiety and depression after a heart attack or angioplasty.

Astin et al (2005) conducted a study in prevalence and patterns of anxiety and depression among patients undergoing elective percutaneous transluminal coronary angioplasty. In this descriptive, repeated-measures investigation, 140 patients were requested to complete the Spielberger State Trait Anxiety Inventory and Cardiac Depression Scale (CDS) at three time points: (1) before admission for elective PTCA (T1); (2) 6 to 8 weeks (T2) after PTCA; and (3) 6 to 8 months (T3) after PTCA. 16% of men and 24% of women, at T1 had state anxiety scores. Trait anxiety scores remained constant over time; higher scores at T1 were due to past acute myocardial infarction. Cardiac Depression Scale scores at T2 and T3 were significantly lower than T1. However, there was increase in CDS scores occurred at T3, compared with T2. At T3, 14% of men and 10% of women were depressed, in relation to T1. Specialist nurses have a greater role in early identification of anxiety and depression.

Denollet et al (2006) examined whether anxiety has incremental value to depressive symptoms in predicting health status in patients undergoing PCI treated in the drug eluting stent era. A series of consecutive patients (n=692) undergoing PCI on part of the rampamycin eluting stent evaluated at Rotterdam cardiology hospital Registry completed the Hospital Anxiety and Depression Scale at 6 months, short form health survey (SF=36) at 6 months and 12 months post PCI .Of 692 patients 471(68.1%) had no symptoms of anxiety no depression, 62(9.0%) had anxiety only.59 (8.5%) had depressive symptoms only and 100(14.5%) had co-occurring symptoms only. There was an overall significant improvement in healthy status between 6 and 12 months post PCI; the interaction effect for time by psychological symptoms was also significant. Generally patients with co-occuring symptoms of anxiety and depression reported poorer health status compared with anxious and depression only patients and no symptom patients, showing that anxiety has incremental value to depressive symptoms in identifying PCI patients at risk for impaired health status treated in drug eluting sent era.

Gegenava et al (2009) investigated the association between history of depressive episode and anxiety and complications in patients after 6 months of coronary artery angioplasty. The research was conducted among 70 patients, the grade of coronary occlusion that would not respond to therapeutic treatment and needed coronary angioplasty .Complications were found in 60 patients after 6 months of coronary angioplasty. Depression was assessed by Beck depression scale and anxiety was assessed by Spilberger State-trait anxiety scale. Complications were discovered in 36 (60%) patients and 24 (40%) patients had no complications. There were no significant statistical differences in depression and anxiety degree in coronary angioplasty period and after 6 months of coronary angioplasty. This study concluded that complications were revealed in patients who had high degree of depression and anxiety.

Literature related to needs of patients subjected to PTCA and their spouses

Moser et al (1994) identified the needs of patients and spouses following an acute cardiac event are an essential first step in the development of nursing interventions to facilitate couple's psychosocial adaptation. Therefore, the self-perceived needs of 49 couples were assessed five months following the patient's hospitalization for an acute cardiac event (i.e. myocardial infarction or coronary angioplasty). Both patients and spouses identified the need for information was the most important compared with all other needs; however, significant changes were found in ratings between patients and spouses. Needs which spouses rated was having a high priority included receiving information about the patient's feelings during the recovery period, talking with the patient about concerns, and receiving information about the expected psychological recovery. Patients consider their spouses particularly important and they did not give importance to the same needs. They rated the need for genuine information about their condition, the need to talk with a health professional about their problems and want to find out solutions were the highest priority. Many of the needs that both patients and spouses as being very important needs were unmet in 40–70% of the cases. In this study, both patients and spouses expressed same needs for information and these needs were not fulfilled by nurses and physicians in the majority of cases.

Lyons et al (2002) studied the patient's expectancies, experiences and knowledge of undergoing a cardiac catheterization procedure, and their perceptions of the types and sources of

information they received, as well as their evaluation of this information. Seventeen patients (eight women, nine men) aged between 45 and 73 undergoing a cardiac catheterization procedure (coronary angiogram or percutaneous transluminal coronary angioplasty (PTCA)) took part in semi-structured interviews. Patients were satisfied with the information which they had received with but still found some parts of the procedure they could not follow. Doctor's technical language and medical terminologies were identified as an obstacle to understanding. It was concluded that effective communication will provide adequate information and it improves patient satisfaction. Providing information from previous patient's experiences may be especially beneficial. Adequate time and planning for education is essential to ensure adequate information.

Lukkarinen et al (2009) studied the experiences of persons whose spouses had undergone bypass surgery (CABS) or angioplasty (PTCA). The purpose was to understand the experiences of patients and their spouses and to develop the education, cardiac rehabilitation of both the patients and their spouses. Data were collected from healthy spouses by open-ended questions.146 subjects were selected. Subjects were asked to write about their experiences of everyday life after their spouses had undergone bypass Graft (CABG) or angioplasty (PTCA). Life was organized in a new way and the earlier busy and work oriented life style had been given up. The informants whose spouses had medications considered their personnel freedom limited, because they had to assume responsibility for the care of their spouses. They had a new role in the family. They had to monitor the symptoms, take care, understand and support physiologically and psychologically. They were expected to take more responsibility for everyday life. They felt hopelessness and helplessness in that situation .They did not receive support from health care professionals. All informants felt uncertainty due to financial problems, poorly planned care, inadequate instructions from health professionals and unexpected changes in the course of the disease. This study concluded that spouses experience a lot of problems such as disease caused changes in emotional balance, a need of continuous control of life styles, about recurrence of new myocardial infarction and worries about new issues of everyday life.

Literature related to video assisted pre procedural information

Tootha et al (1996) studied the effect of a video assisted pre-coronary angioplasty education and counseling program on psychological status, knowledge of patients and quality of life/coping status of their spouses. Forty patients and their spouses participated in a pre-coronary angioplasty education and counseling program and forty considered as controls. Knowledge, psychological status and quality of life/coping status were assessed prior to coronary angioplasty and at four and eleven months in post-coronary angioplasty. Improved knowledge and reduced anxiety were found among patients in the experimental group at four months. Spouses in the experimental group showed improvement in quality of life at 11 months, compared to those in the control group. This study concluded that video assisted pre-coronary angioplasty education and counseling can impact favorably upon knowledge, psychological status of patients and quality of life in spouses.

Gagliano et al (1998) stated that video is as good as and often more effective than traditional methods of patient education in increasing short-term knowledge. It offers advantage in improving long-term retention of knowledge or in promoting compliance with medical regimens. Strength of video is role- modeling. Video assisted teaching decreases patient's anxiety, pain, and sympathetic arousal while increasing knowledge, cooperation, and coping ability.

Herrmann and Kreuzer (2002) hypothesized that sharing a preparatory video film might be helpful in reducing anxiety among patients who were admitted for elective coronary angiography. Communication between the patient and the doctor is hampered by medical terminology. Even when simple words are used, the patient cannot imagine what is really talking about.65 subjects were randomized into experimental and control groups .Both groups received the same leaflet and personnel interview with the doctor, but only one group (Group 2) additionally watched a 14 mts preparatory video. Anxiety was scored with Stait Trait Anxiety Scale (STAI).Group 1 patient who did not watch the video had no significant reduction in anxiety score, group 2 showed significant benefit. Additional aid of video film may be an easy effective way to reduce patient's anxiety.

Shaw et al (2003) found that patients having colonoscopies, computer-assisted instruction (CAI) provided better comprehension and greater satisfaction than standard education. Another randomized controlled trial aimed to determine the impact of an interactive diagnosis-specific video program for informing patients about possible treatment modalities and surgical choices. The tested program facilitated decision-making and helps them to find best treatment choice. As a result, visual materials are increasingly used to inform patients and reduce confusion in the treatment choice.

Hunter et al (2007) explored the information needs of patients treated with primary angioplasty for heart attack. 29 patients recruited, 3–12 days after discharge from hospital. Data were collected with semi-structured interviews. Participants were generally satisfied with the health information which received. The need for more specific information about the procedural pain ,complications after the procedure, risk of recurrence, the level of heart muscle damage, discharge medications, appropriate levels of physical activity and diet restrictions was highlighted. There was no clear preference for informants and timing of information delivery varied considerably. The shortened hospital stay and emotional shock experienced by patients influenced their ability to absorb health information delivery.

According to Timm Reed (2008**)** pre-procedure psychological preparation reduces hospital-induced anxiety. Patient health education material is either sensory- or procedural-oriented. Procedural material describes the steps involved in the procedure. Sensory information focuses on what the patient will see, hear, feel, smell or taste during the procedure. Sensory information helps the patient reduce anxiety by communicating them what to expect during the procedure. Both procedural and sensory information can be presented through different media. Many organizations allocate videos that deliver both procedural and sensory information. If a video is used for education, it is better to develop video on patient understanding manner thus patients can understand and assimilate the information. This study concluded that patients who acquire knowledge pre-procedurally are able to cope better during the actual procedure.

Enzenhofer et al (2008) compared the use and effectiveness of computer-based visualization and standardized conversation for providing patients with information of forthcoming procedures. 56 participants were selected in experimental and control groups. Visualization group received standardized information supported by a tool for displaying two-

dimensional pictures to explain medical facts as well as informative leaflet and control group received standardized information and informative leaflet only. Detailed information was given about the indication, complications, choice of treatments and the details of the forthcoming procedures. Main outcome measures were patient's satisfaction and patient's acquired knowledge. Patient satisfaction was assessed by patient satisfaction questionnaire and knowledge level was assessed by multiple choice questions. Visualization group were more satisfied with the information they received and had higher knowledge scores after the teaching. The results of the test between the two groups showed that these differences in satisfaction and knowledge were statistically significant. In education, pictures usually clarify difficult facts better than written language. It has been reported that in too many cases the information contained in patient information leaflets is inaccurate, difficult to follow or misleading. Manuel Enzenhofer et al. (2008) stated that well-informed patients are better able to support their health and to use health services in a sensible way, thus contributing to their treatment outcome.

Liao (2008) studied the impact of an interactive video on decision making of patients with Ischemic Heart Disease. The patients with Myocardial Infarction, who had undergone diagnostic cardiac catheterization, were found to have significant CAD, watched Shared Decision Making Program (SDP) for Ischemic Heart Disease. Interactive video system designed for decision making. Before and after viewing the Shared Decision Making Program (SDP), patients completed surveys containing multiple choice questions and lickert scale. They rates the program as more helpful than all other decision aids and after viewing the Shared Decision Making Program they expressed increased confidence in their treatment choice and decreased confidence in alternative options.

CHAPTER III

METHODOLOGY

Methodology refers to "the systematic study of methods that are, can be, or have been applied within a discipline". This chapter deals with the research design, variables under the study, setting of the study, sample size, sampling technique, description of the tool, pilot study, procedure for data collection and statistical analysis. This study is aimed to assess the effectiveness of video assisted teaching on anxiety and depression among patients subjected to PTCA and their spouses at KMCH, Coimbatore.

RESEARCH DESIGN

The research design adopted for this study was two group quasi experimental pre test post test design.

The schematic representation of the pre test post test design is as follows.

E 01 x 02

C 01 02

E	-	Experimental group
C	-	Control group
01	-	Pre-test assessment of patients and their spouses
X	-	Video assisted teaching
02	-	Post test assessment of patients and their spouses

VARIABLES UNDER THE STUDY

Independent variable - Video Assisted Teaching

Dependent variables - Anxiety and Depression

SETTING OF THE STUDY

The study was conducted in the Kovai Medical Center and Hospital, Coimbatore. It is an 800 bedded super specialty hospital. K M C H is having well equipped cardiac catheterization lab. There are three interventional cardiologists.120 – 150 patients are attending outpatient clinics per day. Approximately 15 - 20 elective and 15 - 20 emergency PTCA is being performed every month.

POPULATION OF THE STUDY

All the adult patients subjected to PTCA at KMCH and their spouses during the study period.

SAMPLE SIZE

The sample size of the present study was 60. Out of which 15 patients and 15 of their spouses were in experimental group and another 15 patients and 15 of their spouses were in control group.

SAMPLING TECHNIQUE

Non randomized purposive sampling technique was utilized for selecting the samples from the population.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria:

1. Patients who have undergone elective PTCA only.
2. Adult patients aged 30-60 years, both male & female patients subjected to PTCA& their spouses.
3. Patients who were admitted with their spouses only
4. Patients and spouses who can read and write Tamil or English.

Exclusion criteria

1. Patients who had undergone PTCA previously.
2. Patients who were diagnosed to have depression or any other psychiatric illness.
3. Patients who were critically ill.

DESCRIPTION OF THE TOOL

Tool consists of 3 sections.

Section I - Demographic data

Section II - Zung Self Rating Anxiety Scale

Section III - Beck Depression Inventory

SECTION-I: The demographic data of patients included age, sex, type of the family, educational status, nature of work, monthly income, duration of illness and associated illness. The demographic data of spouses included age, sex and educational status.

SECTION-II: Zung Self Rating Anxiety Scale

Zung Self Rating Anxiety Scale is a standardized tool. It was developed by William W.K Zung in 1965 to measure the level of anxiety for patients experiencing anxiety related symptoms. It is a self administered questionnaire having 20 questions with four point scale ranging from 1-4. (None or a little of the time - 1, some of the time - 2, good part of the time - 3, most of the time - 4.)

Scoring key for anxiety

. Question numbers 5, 9, 13, 17 and 19 were negatively scored and remaining fifteen were positively scored.

The scores range from 20-80.

Minimum score – 20 Maximum score – 80

Mild anxiety	-	20 to 44
Moderate anxiety	-	45 to 59
Severe anxiety	-	60 to 74
Extreme anxiety	-	75 to 80

SECTION-III: Beck Depression Inventory -II

Beck Depression Inventory – II is a standardized tool developed by Dr. Aaron. T. Beck in 1967 consisting of 21 questions. It is a self report Inventory. Two alternative statements were given for some questions and same weightage was given to them. Statements were labeled as a and b.

(Question number 18 and 16). From which subjects were asked to select only one statement which is most appropriate to them. .

Scoring key for depression

0-3 is assigned for each answer. The score ranges from 0-63.

Minimum score – 0 Maximum score – 63

Minimal depression	-	0 to 9
Mild depression	-	10 to 18
Moderate depression	-	19 to 29
Severe depression	-	30 to 63

VALIDITY AND RELIABILITY OF THE TOOL

Translated versions of tools in Tamil had been given to the experts in the field of nursing and medicine for content validity. Reliability coefficient alpha of the English version of Zung Self Rating Anxiety Scale was r - 0.72 (Wang, 2003). Spearman browns split half method was used to find out the reliability of Tamil version and it was r - 0.86. Reliability coefficient alpha of the English version of Beck Depression Inventory -II was r -0.92 (Robert 2002) and reliability of Tamil version was r- 0.73.

DESCRIPTION OF INTERVENTION

The intervention for the study was video assisted teaching which was developed by the investigator. After reviewing the literature and books investigator prepared video on the following aspects. Anatomy and physiology of the heart, meaning, pathophysiology and risk factors of Coronary Artery Disease, treatment modalities of CAD, care before, during and after the PTCA procedure, complications of PTCA and lifestyle modifications following PTCA.

PILOT STUDY

Pilot study was conducted among 6 patients who have undergone PTCA & 6 of their spouses to ascertain the feasibility of the study. After conducting the pilot study investigator found that the study was feasible without any modification.

DATA COLLECTION PROCEDURE

Formal permission was obtained from the Chairman of the hospital and interventional cardiologist. Subjects were selected according to the selection criteria and rapport was developed. Investigator explained the need, purpose, benefits of the study and their right to withdraw from the study at any time if they wish. Informed consent was obtained from all the subjects.

Investigator collected the pretest information on the previous day of the PTCA procedure. After collecting the data, investigator provided video assisted teaching in a calm environment. Adequate explanation was given to the patient and spouse in an individualized manner for 20 to 25 minutes. On the day of the PTCA once the patient was brought to coronary care unit 2 hrs after the procedure, the post test data was collected.

STATISTICAL ANALYSIS

The collected data was analyzed by using both descriptive and inferential statistics. Percentage analysis was used to describe the distribution of demographic variables. Mean and standard deviation were used to assess the anxiety and depression. Paired “t” test was used to compare the pre test and post test data of the same group. Independent “t” test was used to compare the post test data between the experimental and control group.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected to evaluate the effectiveness of videoassisted teaching on anxiety and depression of patients subjected to PTCA and their spouses.

Section A : Description of patients and their spouses according to demographic characteristics.

Section B : Comparison of level of anxiety of patients among experimental and control group.

Section C : Comparison of level of anxiety of spouses among experimental and control group.

Section D : Comparison of depression of patients among experimental and control group.

Section E : Comparison of depression of spouses among experimental and control group.

Section F : To associate the anxiety score of patients with selected demographic Variables

Section G : To associate depression of patients with selected demographic variables

Section H : To associate the anxiety score of spouses with selected demographic variables

Section I : To associate depression of spouses with selected demographic variables

SECTION A

Table1: Description of patients according to demographic characteristics

S.NO	Demographic variables		Experimental group n =15		Control group n=15	
			F	Percentage	F	Percentage
01	Age in years	30 – 40 years	3	20.0	3	20.0
		40 – 50years	7	46.7	8	53.3
		50 – 60 years	5	33.3	4	26.7
02	Sex	Male	10	66.7	11	73.3
		Female	5	33.3	4	26.7
03	Type of family	Nuclear	9	60.0	10	66.7
		Joint	6	40.0	5	33.3
04	Education	Illiterate	3	20.0	3	20.0
		Primary education	5	33.3	6	20.0
		Secondary education	4	26.7	3	40.0
		Degree or diploma	3	20.0	3	20.0
05	Nature of work	Sedentary	5	33.3	4	26.7
		Moderate	6	40.0	9	60.0
		Heavy	4	26.7	2	13.3
06	Income per month	Unemployed	4	26.7	3	20.0
		<5000	3	20.0	4	26.7
		5001 – 10000	6	40.0	7	46.7
		>10001	2	13.3	1	6.7

07	Associated illness	Diabetes mellitus	4	26.7	4	26.7
		Hypertension	2	13.3	3	20.0
		DM and HT	6	40.0	7	46.7
		Hyperlipidemia	3	20.0	1	6.7
08	Duration of illness	Up to 1 year	4	26.6	4	26.7
		1 – 2 years	4	26.6	5	33.3
		More than 2 years	7	46.7	6	40.0

Table 1: Description of patients according to demographic characteristics.

In relation to age group majority of the subjects 7(46.7%) patients in experimental group and 8(53.3%) in control group were in age group of 40- 50 years. Regarding sex most of the subjects were males 10(66.7) in experimental group and 11(73.3%) in control group.

In relation to type of family 9(60%) patients in experimental group and 10(66.7%) in control group belongs to nuclear family and 6(40%) in experimental group and 5(33.3%) in control group belongs to joint family.

With regards to the educational status 5(33.3%) patients in experimental group and 6(20%) in control group were educated up to primary level. In relation to nature of work 6(40%) patients in experimental group and 9(60%) in control group were moderate worker. In relation to income of the patients 6(40%) patients in experimental group and 7(46.7%) in control group had income of 5001 – 10000.

Regarding duration of illness majority were having more than 2yrs of illness duration 7(46.7%) patients in experimental group and 6(40.0%) in control group. Regarding associated illness 6(40.0%) in experimental group and 7(46.7%) in control group were affected with diabetes mellitus and hypertension.

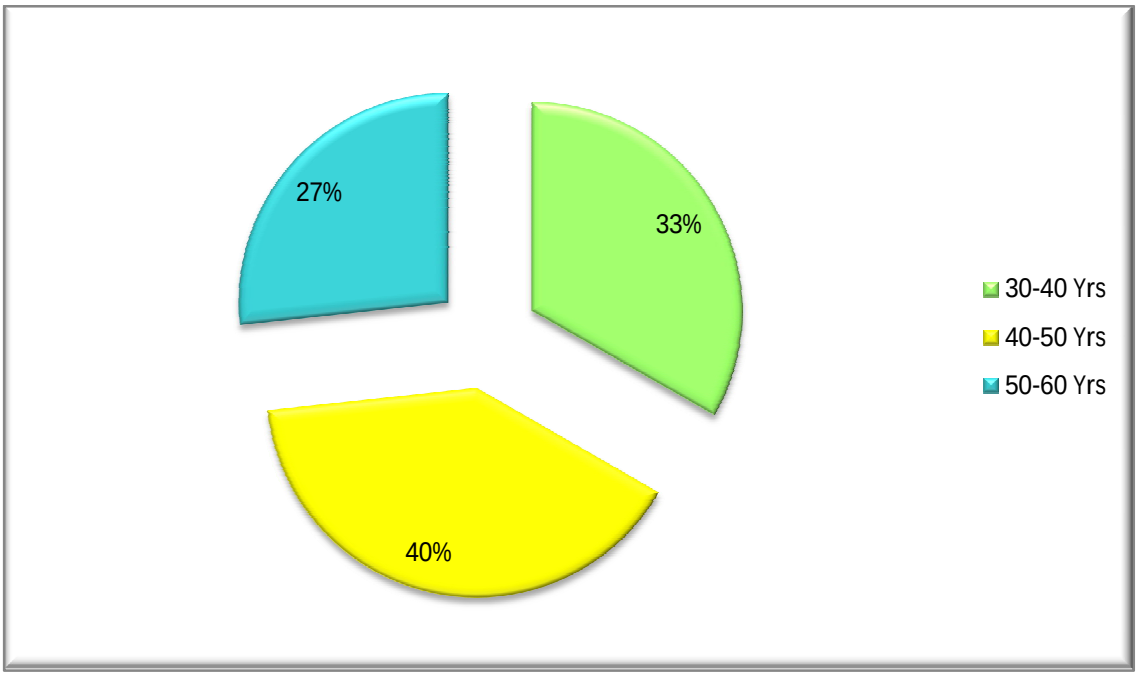

Fig 2: Distribution of patients according to age in experimental group

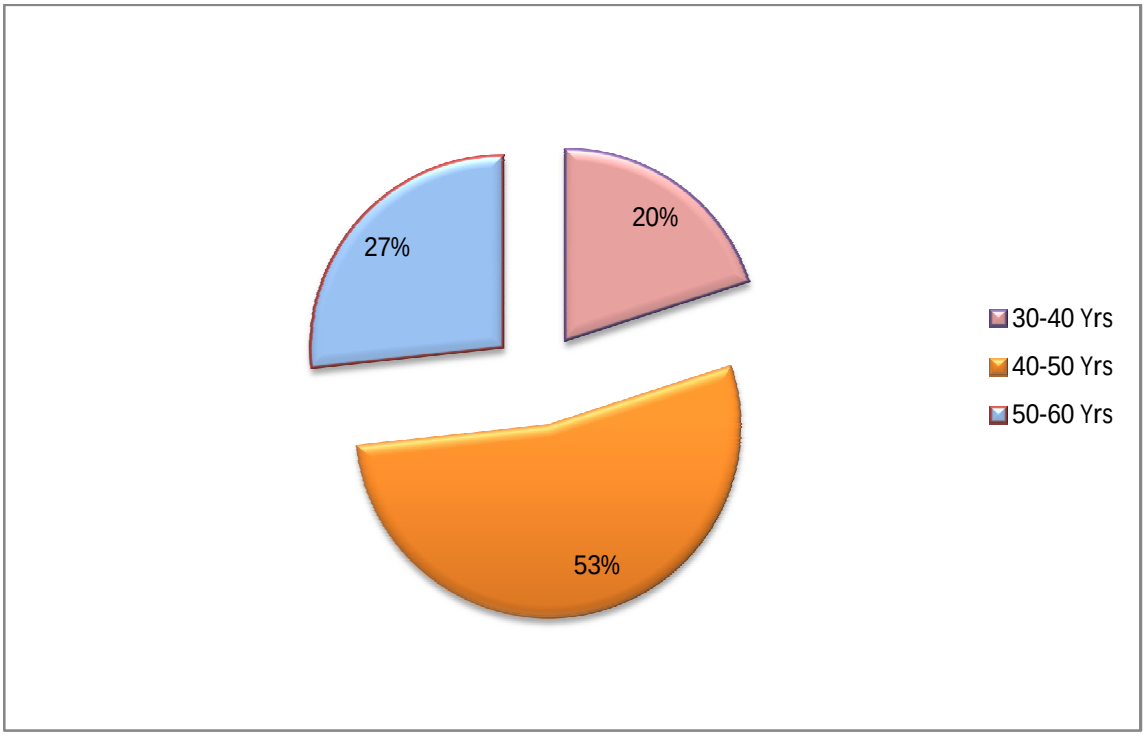

Fig 3: Distribution of patients according to age in control group

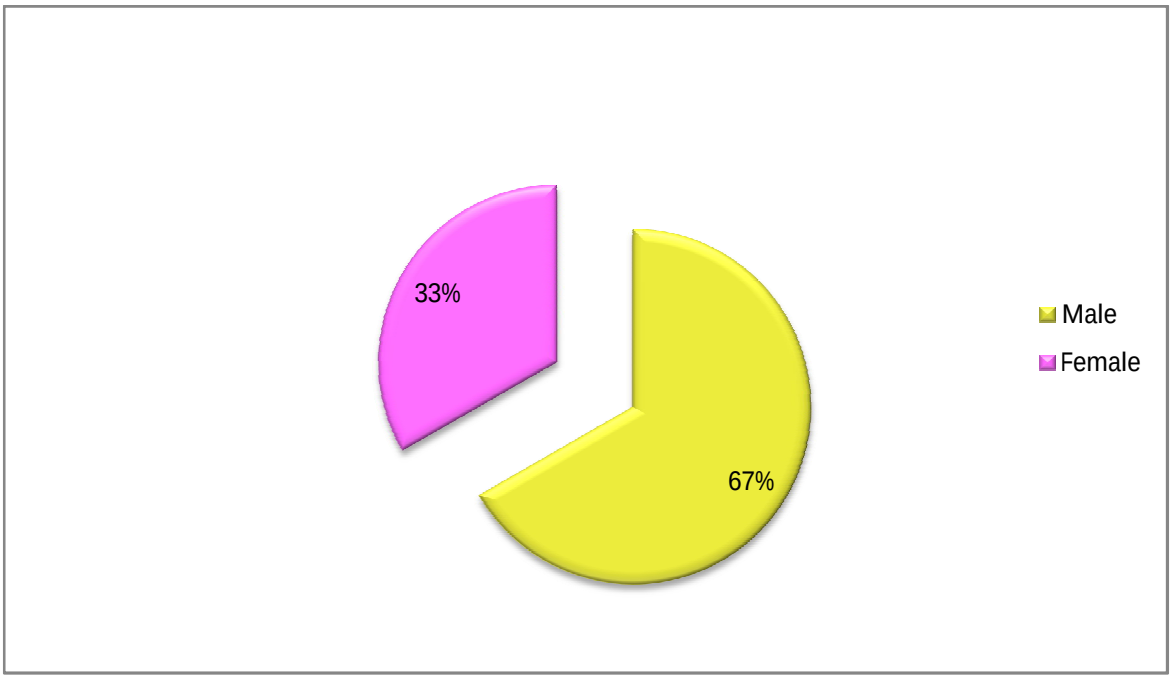

Fig 4: Distribution of patients according to sex in experimental group

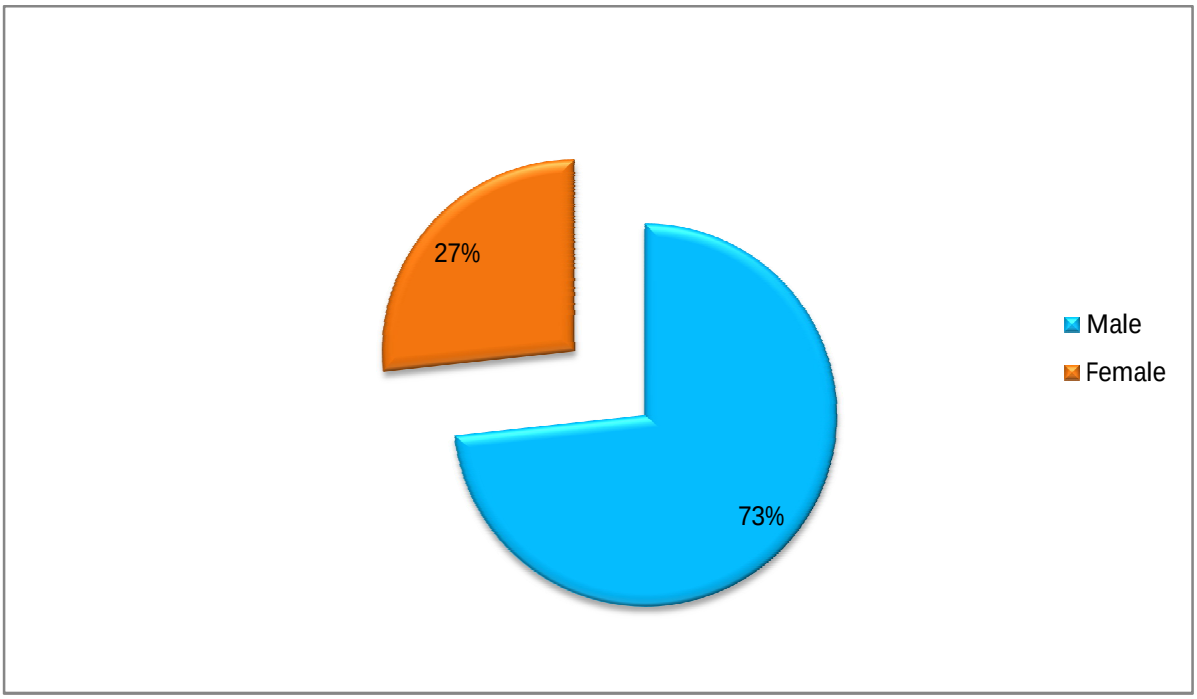

Fig 5: Distribution of patients according to sex in control group

SECTION A

Table 2: Description of spouses according to demographic characteristics

S.NO	Demographic variables		Experimental group n =15		Control group n=15	
			F	Percentage	F	Percentage
01	Age in years	30 -40	5	33.3	6	40.0
		40- 50	7	46.7	7	46.7
		50 – 60	3	20.0	2	13.3
02	Sex					
		Male	5	33.3	4	26.7
		Female	10	66.7	11	73.3
04	Education	Illiterate	6	40.0	6	40.0
		Primary education	3	20.0	2	13.3
		Secondary education	5	33.3	6	40.0
		Degree or diploma	1	6.7	1	6.7

Table 2: Description of spouses according to demographic characteristics.

The data shows that 7(46.7%) in experimental group and 7(46.7%) in control group were in age group of 40 – 50 years.

Regarding sex most of the subjects were females 10(66.7) in experimental group and 11(73.3%) in control group and 5(33.3%) males in experimental group and 4(26.7%) in control group.

With regards to the educational status the majority of the subjects were illiterate 6(40%) in experimental group and 6(40%) in control group and 3(20%) in experimental group and 2(13.3%) in control group were educated up to primary level.

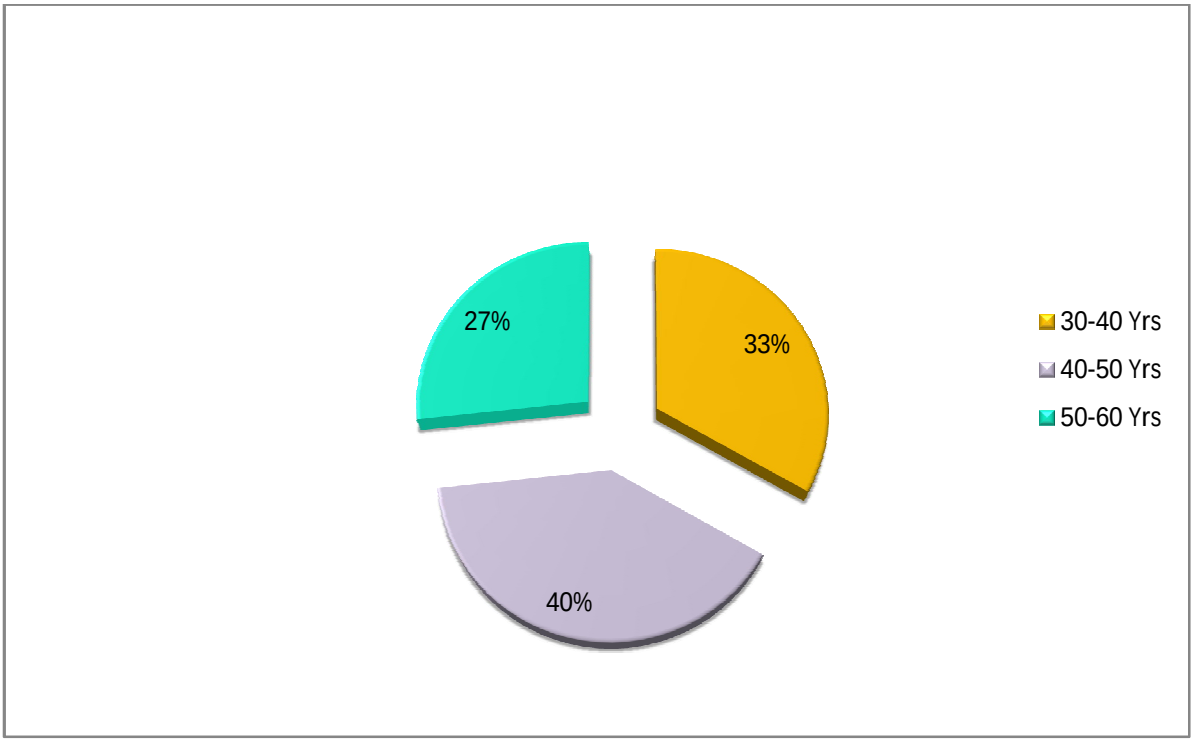

Fig 6: Distribution of spouses according to age in experimental group

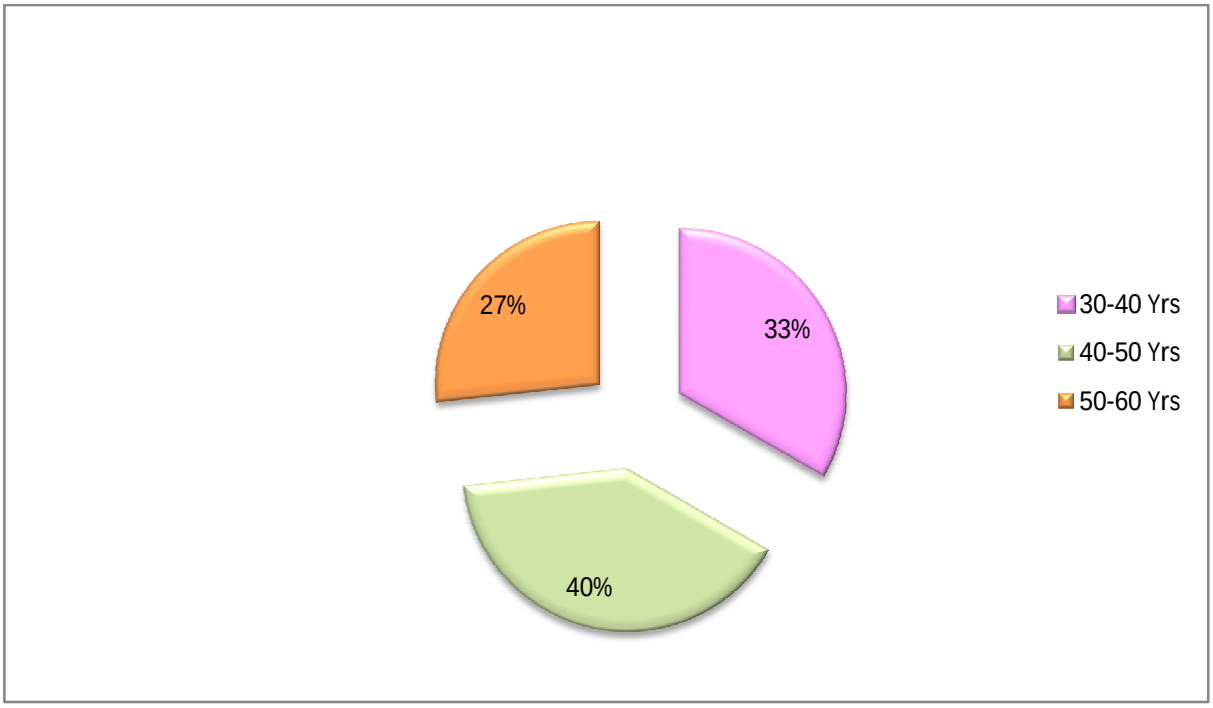

Fig 7: Distribution of spouses according to age in control grou

SECTION B

Comparison of patients level of anxiety among control group and experimental group

Table 3: Comparison of pre and post test anxiety level of patients in control group.

n=15

SI.NO	ANXIETY	Mean	Standard deviation	Paired "t" test
01	Pre test	56.87	4.75	1.289 (NS)
02	Post test	55.60	5.41	

NS – Not significant

Table 3 portrays that the obtained 't' value for anxiety level of patients in control group is 1.289, the't' value is statistically not significant at any level. There is no significant change in the anxiety level of patients.

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Table 4: Comparison of pre and post test anxiety level of patients in experimental group

n = 15

SI.NO	ANXIETY	Mean	Standard deviation	Paired "t" test
01	Pre test	55.73	4.08	6.181**
02	Post test	45.67	4.49	

**P< 0.01

Table 4 depicits the mean difference between the pre test and post test are 55.73 and 45.67 respectively. The obtained 't' value for anxiety level of patients in experimental group is 6.181.The 't' value is statistically significant at 0.01 level. It reveals that there is significant difference in anxiety level of patients after receiving video assisted teaching.

Table 5: Comparison of pre test anxiety level of patients in experimental and control group.

n = 30

SI.NO	ANXIETY	Mean	Standard deviation	Independent "t" test
01	Experimental group	55.73	4.08	0.076 (NS)
02	Control group	56.87	4.75	

NS - Not significant

Table 5 conveys the obtained"t" value for pre test anxiety level of patients in experimental group and control group is 0.076, the 't' value is not significant at any level. It shows that both the experimental and control group patients are statistically equivalent at the beginning of the experiment and the homogeneity is maintained.

Table 6: Comparison of post test anxiety level of patients in experimental and control group

n = 30

SI.NO	ANXIETY	Mean	Standard deviation	Independent "t" test
01	Experimental group Post test	45.67	4.49	6.631**
02	Control group Post test	55.60	5.41	

**P<0.01

Table 6 portrays the obtained't' value for anxiety level of patients in experimental group and control group is 6.631.The 't' value is statistically significant at 0.01 level. This shows that there is significant difference in the experimental group after giving video assisted teaching.

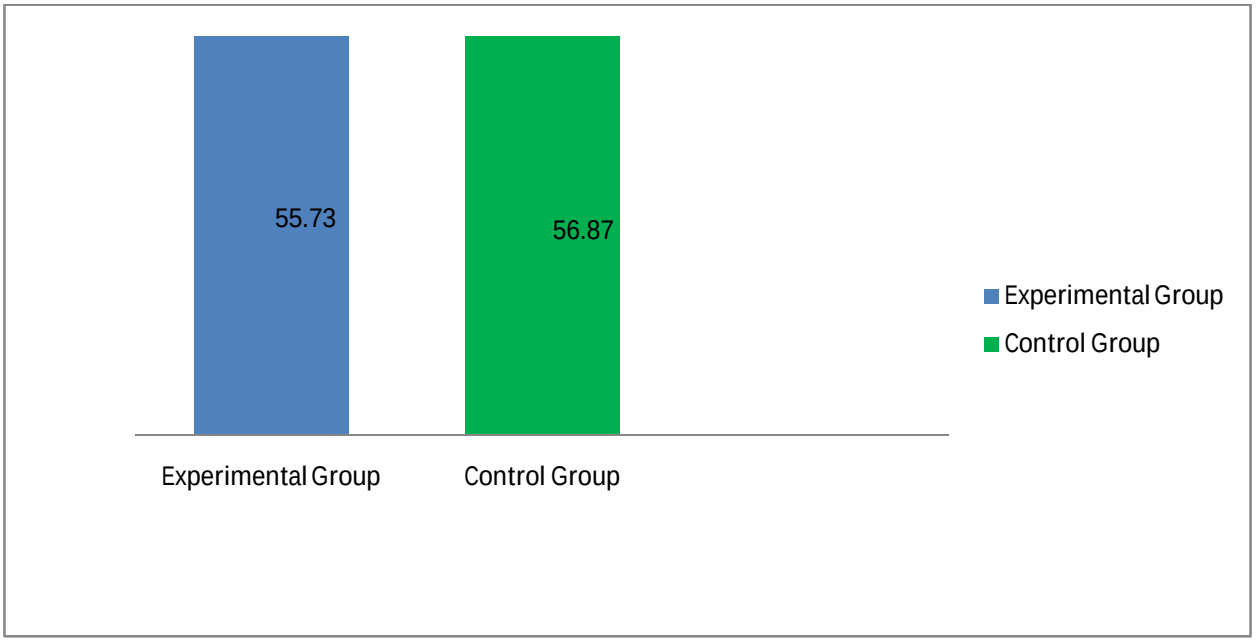

Fig 8: Comparison of pre test anxiety level of patients in experimental and control group.

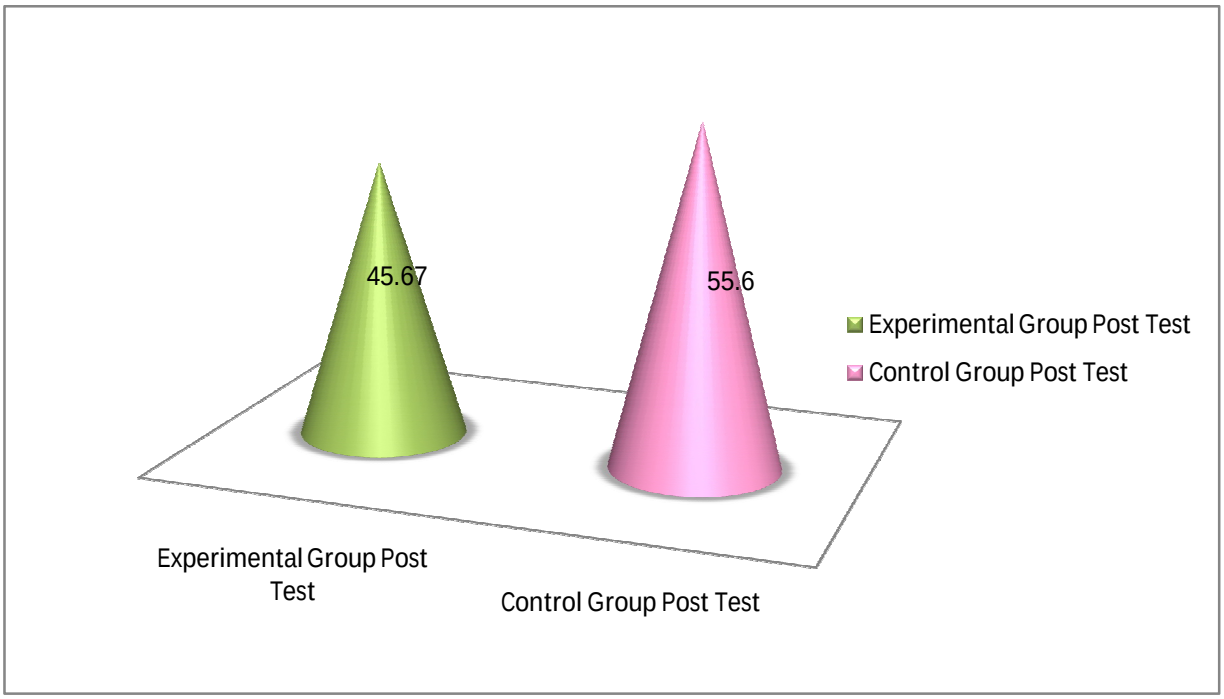

Fig 9 : Comparison of post test anxiety level of patients in experimental and control group

SECTION C

Comparison of level of anxiety of spouses among control group and experimental group.

Table 7: Comparison of pre and post test anxiety level of spouses in control group.

n =15

SI.NO	ANXIETY	Mean	Standard deviation	Paired "t" test
01	Pre test	53.53	5.54	1.740(NS)
02	Post test	54.33	6.19	

NS – Not significant

Table 7 shows that the mean difference between pretest and post test are 53.53 and 54.33. The obtained't' value for anxiety level of spouses in control group is 1.740, the't' value is not statistically significant at any level.

Table8: Comparison of pre and post test anxiety level of spouses in experimental group

n = 15

SI.NO	ANXIETY	Mean	Standard deviation	Paired "t" test
01	Pre test	52.46	3.09	5.836**
02	Post test	43.40	5.57	

**P< .01

Table 8 implies the obtained mean difference between the pre test and post test are 52.46 and 43.40 respectively. The 't' value for anxiety level of spouses in experimental group is 5.836. The't' value is statistically significant at 0.01 level. This shows that there is change in level of anxiety of spouses after video assisted teaching

Table 9: Comparison of pre test anxiety level of spouses in experimental and control group.

n = 30

SI.NO	ANXIETY	Mean	Standard deviation	Independent "t" test
01	Experimental group	52.47	3.09	0.651(NS)
02	Control group	53.53	5.54	

NS - Not significant

Table 9 illustrates the obtained't' value for anxiety of spouses in experimental group and control group is 0.651, the 't' value is not significant at any level. This shows that both the experimental and control group spouses are statistically equivalent at the beginning of the experiment and the homogeneity is maintained.

Table 10: Comparison of post test anxiety level of spouses in experimental and control group

n = 30

SI.NO	ANXIETY	Mean	Standard deviation	Independent "t" test
01	Experimental group Post test	43.40	5.57	5.085**
02	Control group Post test	54.33	6.19	

**P<0.01

Table 10 shows that obtained't' value for anxiety level of spouses in experimental group and control group is 5.085.The 't' value is statistically significant at 0.01 level. This shows that there is significant difference in the experimental group of spouses after giving video assisted teaching.

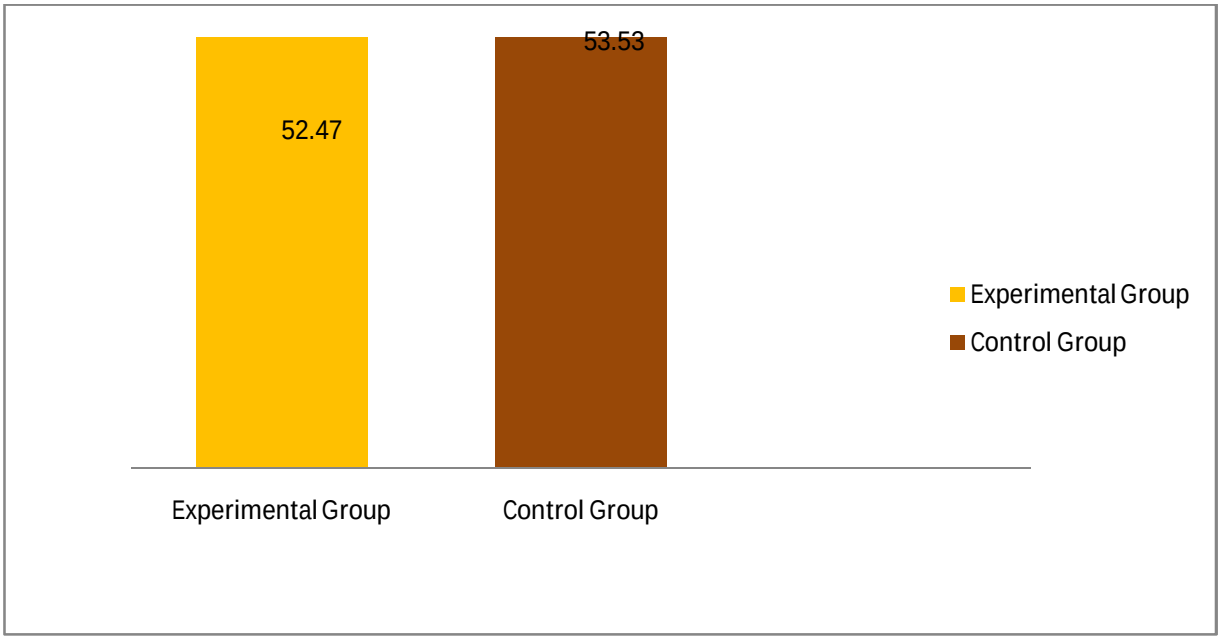

Fig 10: Comparison of pre test anxiety level of spouses in experimental and control group.

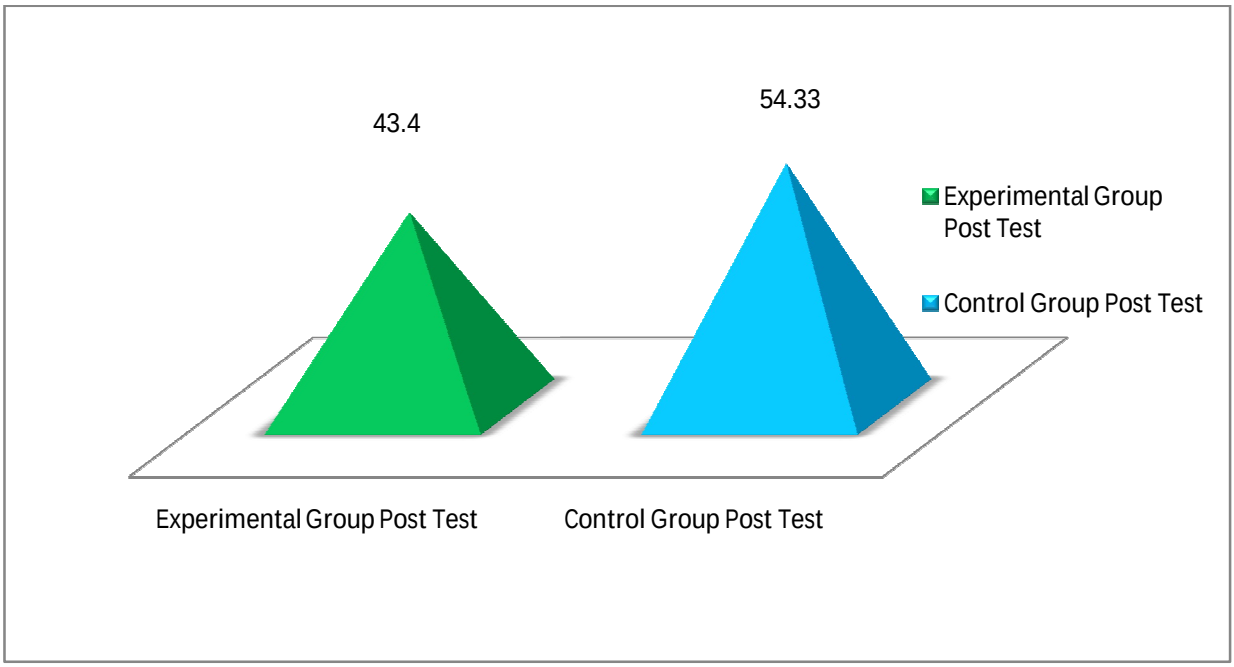

Fig 11: Comparison of post test anxiety level of spouses in experimental and control group

SECTION D

Comparison of depression of patients among control group and experimental group

Table 11 : Comparison of pre and post test depression of patients in control group.

n=15

SI.NO	DEPRESSION	Mean	Standard deviation	Paired "t" test
01	Pre test	17.73	2.25	0.130(NS)
02	Post test	17.67	0.98	

NS – Not significant

Table 11 shows that the obtained 't' value for the depression of patients between pretest and post test control group is 0.130, the't' value is not statistically significant at any level.

Table 12: Comparison of pre and post test depression of patients in experimental group

n = 15

SI.NO	DEPRSSION	Mean	Standard deviation	Paired "t" test
01	Pre test	17.80	2.83	0.494(NS)
02	Post test	17.60	3.24	

NS - Not significant

Table 12 shows the obtained't' value for depression of patients in experimental group is 0.494. The't' value is not statistically significant at any level. This shows that there is no significant change in depression of patients in experimental group. There is no change in depression of patients after video assisted teaching.

Table 13 : Comparison of pre test depression of patients in experimental and control group.

n = 30

SI.NO	DEPRESSION	Mean	Standard deviation	Independent "t"test
01	Experimental group	17.80	2.833	0.071(NS)
02	Control group	17.73	2.251	

NS - Not significant

Table 13 shows the obtained 't' value for depression of patients in experimental group and control group is 0.071, the't' value is not statistically significant at any level. This shows that both the experimental and control group of patients are statistically equivalent at the beginning of the experiment and the homogeneity is maintained.

Table 14: Comparison of post test depression of patients in experimental and control group

n = 30

SI.NO	DEPRESSION	Mean	Standard deviation	Independent "t" test
01	Experimental group Post test	17.60	3.24	0.077(NS)
02	Control group Post test	17.67	0.98	

NS – Not significant

Table 14shows that obtained't' value for depression of patients in experimental group and control group is 0.077.This shows that there is no significant difference in depression and the intervention is not effective in depression of patients.

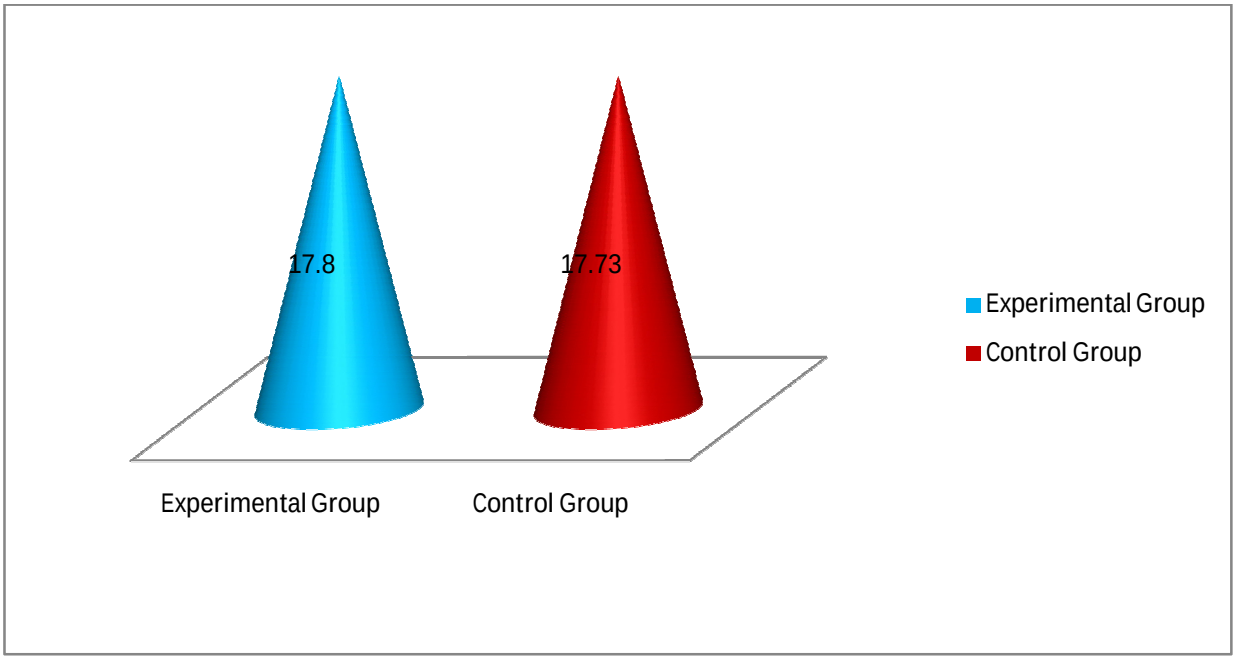

Fig 12 : Comparison of pre test depression of patients in control and experimental group.

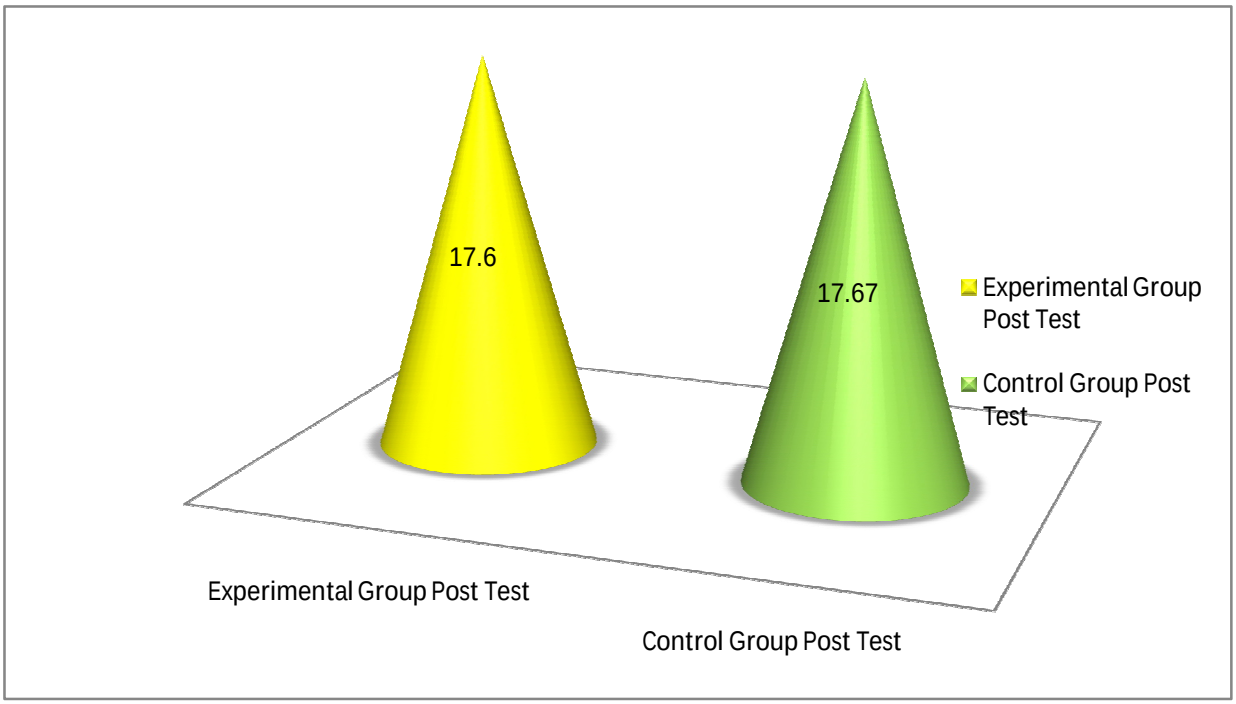

Fig 13: Comparison of post test depression of patients in experimental and control group

SECTION E

Comparison of depression of spouses among control group and experimental group.

Table 15 : Comparison of pre and post test depression of spouses in control group.

n =15

SI.NO	DEPRESSION	Mean	Standard deviation	Paired "t" test
01	Pre test	16.93	1.944	0.636(NS)
02	Post test	16.67	1.839	

NS – Not significant

Table 15 shows that the obtained 't' value for pre test and post test depression of spouses in control group is 0.636, the't' value is not statistically significant at any level.

Table 16: Comparison of pre and post test depression of spouses in experimental group

n =15

SI.NO	DEPRESSION	Mean	Standard deviation	Paired" test
01	Pre test	17.00	2.80	0.459(NS)
02	Post test	16.87	2.62	

NS - Not significant

Table 16 shows the obtained 't' value for depression of spouses in experimental group is 0.459.The't' value is not statistically significant at any level. It reveals that there is no change in depression of spouses before and after receiving video assisted teaching.

Table 17: Comparison of pre test depression of spouses in experimental and control group.

n =30

SI.NO	DEPRESSION	Mean	Standard deviation	Independent "t"test
01	Experimental group	17.00	2.803	0.076(NS)
02	Control group	16.93	1.944	

NS - Not significant

Table 17 portrays the obtained't' value for depression of spouses in experimental group and control group is 0.076, the't' value is not statistically significant at any level. This shows that both the experimental and control group of spouses are statistically equivalent at the beginning of the experiment and the homogeneity is maintained.

Table 18 : Comparison of post test depression of spouses in experimental and control group

n =30

SI.NO	DEPRESSION	Mean	Standard deviation	Independent "t" test
01	Experimental group Post test	16.87	2.62	0.242(NS)
02	Control group Post test	16.67	1.84	

NS – Not significant

Table 18 depicits that obtained't' value for depression of spouses in experimental and control group is 0.242.The 't' value is not statistically significant at any level. This shows that there is no significant change in the depression of spouses after video assisted teaching.

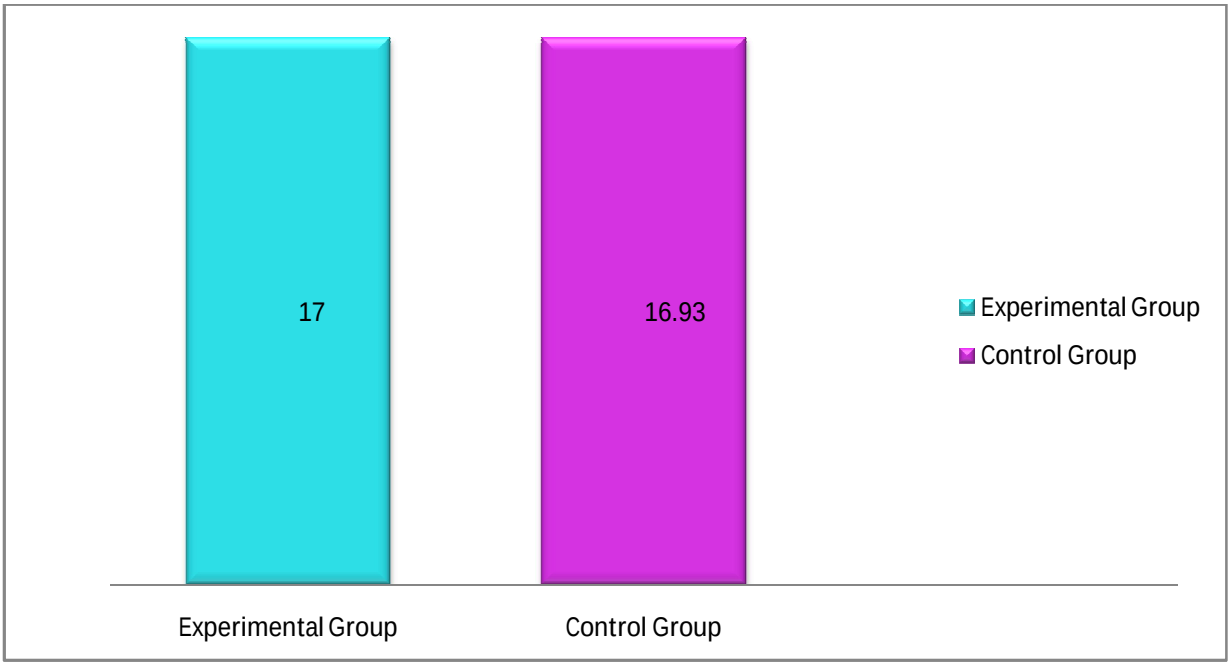

Fig 14: Comparison of pre test depression of spouses in experimental and control group.

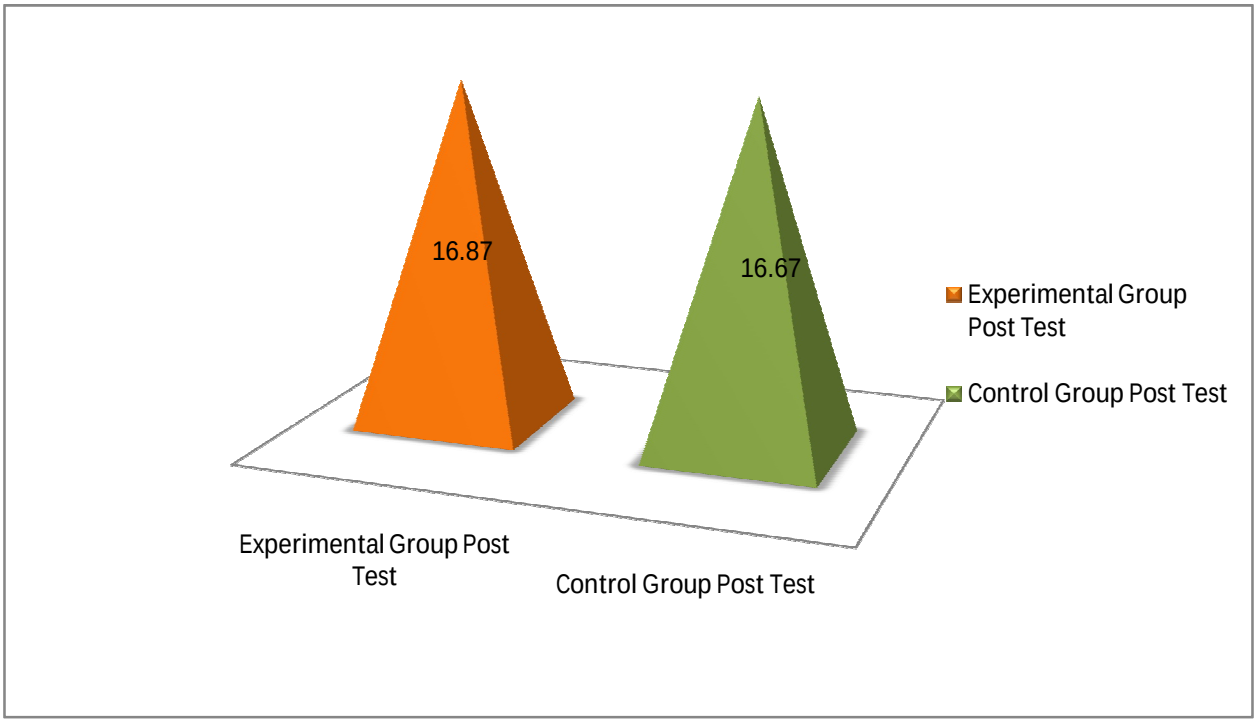

Fig 15: Comparison of post test depression of spouses in experimental and control group

SECTION F

To associate anxiety score of patients with selected demographic variables

Table 19: Anxiety among patients and sex

n = 15

SI.NO	Age	N	Mean	Standard deviation	Independent "t" test
01	Male	10	46.30	4.57	0.759(NS)
02	Female	5	44.40	4.56	

NS – Not significant

Table 19 shows the obtained't' value of 0.759 is not significant at any level. This shows that there is no significant association between anxiety of patients and sex.

SECTION G

To associate the depression of patients with selected demographic variables

Table 20: Depression among patients and sex

n =15

SI.NO	Sex	N	Mean	Standard deviation	Independent "t" test
01	Male	10	17.40	2.17	0.329(NS)
02	Female	5	18.0	5.04	

NS – Not significant

Table 20 shows the obtained't' value of 0.329 is not significant at any level. This shows that there is no significant association between depression of patients and sex.

SECTION H

To associate anxiety score of spouses with selected demographic variables

Table 21: Anxiety among spouses and sex

n =15

SI.NO	Age	N	Mean	Standard deviation	Independent "t" test
01	Male	5	39.40	3.04	2.23**
02	Female	10	45.40	5.54	

**P< 0.01 significant

Table 21 conveys the obtained't' value is 2.23 which is significant at 0.05 level. There is a significant association between anxiety of spouses and their sex which shows that female spouses had more anxiety compared to male spouses.

SECTION I

To associate depression of spouses with selected demographic variables

Table 22: Depression among spouses and sex

n =15

SI.NO	Age	N	Mean	Standard deviation	Independent "t" test
01	Male	5	16.80	4.32	0.067(NS)
02	Female	10	16.90	1.52	

NS – Not significant

Table 22 shows the obtained't' value of 0.067 which is not statically significant at any level. This shows that there is no significant association between depression of spouses and their sex.

CHAPTER V

DISCUSSION, SUMMARY, CONCLUSION, IMPLICATIONS LIMITATIONS AND RECOMMENDATIONS

This chapter deals with discussion, summary and conclusion drawn. It also deals with the limitations of the study, implications and recommendations for further research in different means.

Two group quasi experimental pre test post test was adopted to evaluate the effectiveness of video assisted teaching on anxiety and depression among patients subjected to PTCA and their spouses at KMCH, Coimbatore.

It was decided to do the study with 60 subjects, out of which 30 subjects ,15 patients and 15 of their spouses were assigned in experimental group and remaining 30 in which 15 patients and 15 of their spouses were assigned in control group. The subjects in the experimental group received video assisted teaching and the control group received only routine instruction given in the hospital.

1) The first objective of the study was to assess the effectiveness of video assisted teaching on level of anxiety among patients subjected to PTCA and their spouses.

In order to identify the effectiveness of video assisted teaching on level of anxiety among patients subjected to PTCA and their spouses, investigator assessed the level of anxiety before and after the intervention.

Comparison of the pre and post test anxiety level of patients in control group

The paired 't' value of the pre and post test anxiety level of patients in control group was 1.289 which was not statistically significant at any level. This showed that there is no significant difference in the anxiety level of patients in control group.

Comparison of the pre and post test anxiety level of patients in experimental group

The mean pretest score of experimental group was 55.73 and mean post test score after video assisted teaching was 45.67. The paired't' value for anxiety level of patients in experimental group was 6.181, which was statistically significant at 0.01 level. The above findings shown that there is significant change in anxiety level of patients among experimental group after receiving video assisted teaching.

Comparison of the pre test anxiety level of patients in experimental and control group

The independent‘t’ value in experimental and control group was 0.076 which was not statistically significant at any level. This showed that patients in experimental and control group had same anxiety level before intervention. Homogeneity was maintained.

Comparison of post test anxiety level of patients in experimental and control group

The independent‘t’ value of post test anxiety scores of patients in experimental and control group was 6.631, which was statistically significant at 0.01 level. This showed that there is a significant change in anxiety level of patients after the intervention.

Comparison of the pre and post test anxiety level of spouses in control group

The paired‘t’ value of pre test and post test anxiety score in control group was 1.740 which was not statistically significant at any level. This showed that there is no significant difference in the anxiety level of patients in control group.

Comparison of the pre and post test anxiety level of spouses in experimental group

The mean pretest score of experimental group was 52.46 and mean post test score after video assisted teaching was 43.40. The paired‘t’ value for anxiety level of patients in experimental group was 5.836 and‘t’ value was statistically significant at 0.01 level. These findings showed that there is significant change in anxiety level of spouses among experimental group after receiving video assisted teaching.

Comparison of the pre test anxiety level of spouses in experimental and control group

The independent‘t’ value in experimental and control group was 0.651 which was not statistically significant at any level. This showed that spouses in experimental and control group had same anxiety level before intervention.

Comparison of post test anxiety level of spouses in experimental and control group

. The independent‘t’ value of post test anxiety scores of spouses in experimental and control group was 5.085, which was statistically significant at 0.01 level. This showed that there is significant change in anxiety level of spouses after receiving the intervention.

In the present study there is significant change in the level of anxiety among those who received video assisted teaching than those who did not receive vide assisted teaching. The researcher found that anxiety of patients subjected to PTCA and their spouses was considerably reduced as the result of video assisted teaching. Hence the first hypothesis is accepted. There is significant difference in the level of anxiety between those who receive video assisted teaching and those who do not receive.

The present study is supported by the following study. Renga et al (2003) studied the effectiveness of informative video on reducing anxiety level and patient satisfaction among patients undergone elective coronary angiography. The patients in control group received standard routine care while the informative video was shown to the experimental group only. The Spielberger scale was used to measure anxiety level before the procedure and satisfaction of the received information was measured by using a scale with semantic indication. There was a significant change in the level of anxiety and satisfaction of the information received. Anxiety level and level of satisfaction of the received information of the experimental group was significant at 0.01 level. This is accepted that informative video is an instrument to lower anxiety levels and increases the level of satisfaction.

2) **The second objective of the study was to assess the effectiveness of video assisted teaching on depression among patients subjected to PTCA and their spouses.**

Comparison of the pre and post test depression of patients in control group

The paired‘t’ test of pre and post test depression score in control group was 0.130 which was not statistically significant at any level. This showed that there is no significant difference in the depression of patients in control group.

Comparison of pre and post test depression of patients in experimental group

The mean pretest score of experimental group was 17.80 and mean post test score after video assisted teaching was 17.60. The paired‘t’ value for the depression of patients in experimental group was 0.494 which was not statistically significant at any level. Even though the paired ‘ t’ test score was not statistically significant there was slight changes in the mean post test score of spouses.

Comparison of the pre test depression of patients in experimental and control group

The independent ‘t’value in experimental and control group was 0.071, which was not statistically significant at any level. This showed that patients in experimental and control group had same depression before the intervention. Homogeneity was maintained.

Comparison of post test depression of patients in experimental and control group

The independent‘t’ value of post test depression scores of patients in experimental and control group was 0.077 which was not statistically significant at any level. This showed that there is no significant change in depression of patients after the intervention.

Comparison of the pre and post test depression of spouses in control group

The paired 't'test of pre and post test depression score of spouses in control group was 0.636 which was not statistically significant at any level. This shows that there is no significant difference in depression of spouses in control group

Comparison of the pre and post test depression of spouses in experimental group

The mean pretest score of experimental group was 17.00 and mean post test score after video assisted teaching was 16.87. The paired't' value for the depression of spouses in experimental group was 0.459 which was not statistically significant at any level. Even though the paired't' test score was not statistically significant there was slight changes in the mean post test score of spouses.

Comparison of the pre test depression of spouses in experimental and control group

The independent't' value between experimental and control group was 0.076 which was not statistically significant at any level. It shows that spouses in experimental group and control group had same depression before the intervention.

Comparison of post test depression of spouses in experimental and control group

The independent't' value between the post test depression score of spouses in experimental and control group was 0.242 which was not statistically significant at any level. This revealed that there is no significant change in depression after the intervention.

In the present study there is no significant change in the depression of patients and their spouses in experimental group. But there are slight changes in the mean post test score of patients and their spouses.

3. To associate the level of anxiety and depression with selected demographic variables among patients subjected to PTCA.

The independent't' value of anxiety with sex of the patient was 0.759 which was not statistically significant at any level. No significant association between anxiety and sex of the patients.

The independent 't' value of depression with sex of the patient was 0.329 which was not statistically significant at any level. No significant association between depression and their sex of the patients.

4. To associate the level of anxiety and depression with selected demographic variables among spouses of patients subjected to PTCA.

The independent 't' value of anxiety with sex of the spouse was 2.23 which were statistically significant at 0.05 level. There is significant association between anxiety and sex of the spouses. Female spouses had more anxiety than the male spouses.

The independent 't' value of depression with sex of the spouse was 0.067 which was not statistically significant at any level. No significant association between depression and sex of the spouses.

SUMMARY

The study was conducted to assess the effectiveness of video assisted teaching on anxiety and depression among patients subjected to PTCA and their spouses at KMCH, Coimbatore.

The objectives of the study were to

1. assess the effectiveness of video assisted teaching on level of anxiety among patients subjected to PTCA and their spouses.

2. determine the effectiveness of video assisted teaching on depression among patients subjected to PTCA and their spouses.

3. associate anxiety and depression with selected demographic variables among patients subjected to PTCA.

4. associate anxiety and depression with selected demographic variables among spouses of patients subjected to PTCA.

Major findings of the study

1. The obtained 't' value 6.181 shows that there is statistically significant difference in pre test and post test anxiety level of patients in experimental group at 0.01 level.
2. The obtained 't' value 0.076 shows that there is no statistically significant difference between pretest anxiety level of patients in experimental and control group at any level.
3. The obtained't' value 6.631 shows that there is statistically significant difference in post test anxiety level of patients in experimental and control group at 0.01 level.
4. The obtained't' value 0.651 shows that there is no statistically significant difference in pretest anxiety level of spouses in experimental and control group.
5. The obtained't' value 5.836 shows that there is statistically significant difference in pre test and post test anxiety level of spouses in experimental group.
6. The obtained't' value 5.085 shows there is statistically significant difference in post test anxiety level of spouses in experimental group and control.

7. The obtained ‘t’ value 0.494 shows that there is no statistically significant difference in pre test and post test depression of patients in experimental group
8. The obtained‘t’ value 0.077 shows that there is no statistically difference in post test depression of patients in experimental group and control group.
9. The obtained‘t’ value 0.459 shows that there is no statistically significant pre test and post test depression of spouses in experimental group.
10. .The obtained‘t’ value 0.242 shows that there is no statistically significant post test depression of spouses in experimental group and control group.

CONCLUSION

The results of the study showed that there is significant difference in the level of anxiety among patients and spouses in experimental group compared to control group. Anxiety level of patients and their spouses can be reduced with the aid of video assisted teaching. Adequate pre procedural information promotes confidence and thereby reduces complication

The present study showed that there is no statistically significant difference in depression among patients and their spouses between control group and experimental group. There is no change in depression of patients and their spouses those who received video assisted teaching.

IMPLICATIONS

The study has implication for nursing practice, nursing education, nursing administration and nursing research.

Nursing practice

1. Through this study it has shown that video assisted teaching reduce the level of anxiety of patients subjected to PTCA and their spouses. Pre procedural information to the patients and spouses will be helpful to make awareness about lifestyle modifications and thereby reduce the recurrence of problems.
2. Nurses can be involved in providing video assisted teaching, so as to reduce further complications of anxiety and depression such as recurrent ischemic events, arrhythmias and sudden cardiac death.
3. Video assisted teaching can be applied in other procedures such as colonoscopy and endoscopy. Video assisted teaching can be routinely practiced in the hospitals.

Nursing education

1. Effective in-service training can be given to the nurses and students ,so that they can prepare the video and provide adequate information on the particular procedure.
2. Students and staff should gain knowledge regarding the measures to reduce anxiety and depression among patients and their family members.
3. Students and staff should recognize the importance of giving information and provides adequate information to the patients and their family members.
4. The nursing curriculum should equip the students with adequate knowledge and should teach them the use of various technologies for imparting knowledge to the patients.

Nursing administration

1. Nursing administrator can conduct regular in-service training to the staff nurses and students to improve the standard of nursing care.
2. Nursing administrator can prepare policies about the fulfillment of patient's information adequacy.
3. Nursing administrator can co ordinate and make arrangements for video assisted teaching on various procedures.

Nursing research

1. The findings of the present study can be a foundation to conduct planned pre procedural information on larger samples to generalize the findings.
2. The study can be conducted to assess video assisted pre procedural information on other procedures such as colonoscopy, endoscopy and angiography.

LIMITATIONS

1. Study was limited to a small sample size.
2. Duration of study was limited to six weeks.
3. Study was limited to literate patients who could read and write Tamil or English.
4. Study was limited to the patients undergone angioplasty first time only.

RECOMMENDATIONS

1. The study can be replicated involving larger population and sample for longer period. So that findings can be generalized.
2. A similar study can be done in different settings.
3. A similar study can be done on other procedures such as bronchoscopy and calposcopy.
4. Comparative study can be done between male and female patients.
5. Further research can be conducted on the quality of life of patients undergone PTCA and their spouses.

ABSTRACT

The present study entitled "A study to assess the effectiveness of video assisted teaching on anxiety and depression among patients subjected to PTCA and their spouses at KMCH, Coimbatore" was undertaken during the year 2010 – 2011 in partial fulfilment of the requirement for the degree of master of science in Nursing at KMCH College Of Nursing, Which is affiliated to Dr. M. G. R Medical University, Chennai.

Objective: To assess the effectiveness of video assisted teaching on level of anxiety and depression among patients subjected to PTCA and their spouses. To compare the pre test and post test level of anxiety and depression among patients subjected to PTCA and their spouses. To associate the relationship between selected demographic variables with level of anxiety and depression among patients subjected to PTCA and their spouses. **Design:** Quasi experimental research design. **Setting:** Kovai Medical Center& Hospital, Coimbatore. **Sample:** 60 subjects both male and female 30 – 60 years old subjected to PTCA first time and their spouses were recruited for the study of which 30 were in control group and another 30 in experimental group. **Sampling technique:** Non randomized purposive sampling technique was used to select the sample for this study. **Conceptual frame work:** Imogene King's Goal Attainment Model was adopted for this study. **Data collection**: Zung Self Rating Anxiety Scale and Beck Depression Inventory were used to assess anxiety and depression. **Intervention:** The intervention for the study was video assisted teaching. Routine hospital instruction was given to the control group while routine hospital instruction plus video assisted teaching prepared by the researcher was given to experimental group. **Findings:** There was decrease in level of anxiety and there was no statistically significant change in depression. **Conclusion:** Video assisted teaching is an effective method to reduce anxiety among patients subjected to PTCA and their spouses and it can be introduced by nurses and physicians before any procedure

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SECTION – I

DEMOGRAPHIC PROFILE OF PATIENTS

1 . Sample number :

2. Age :

a. 30 -40 Years

b. 40 -50 Years

c. 50-60Years

3. Sex :

a. Male

b. Female

4. Type of the family :

a. Nuclear

b. Joint

4. Education :

a. Illiterate

b. Primary education

c. Secondary education

d. Degree or diploma

5. Nature of work :

a. Sedentary

b. Moderate

c. Heavy

6. Income per month (Rs) :

a. Unemployed

b. Less than 5000

c.5001 – 10000

d. More than 10001

8. Duration of illness (Month) :

a. Less than 1 yr

b 1 – 2 yrs

c. More than 2 yrs

7. Associated illness :

a. Diabetes mellitus

b. Hypertension

c. Diabetes mellitus and hypertension

d. Hyperlipidemia

DEMOGRAPHIC PROFILE OF SPOUSES

1. Age :

a. 30 -40 Yrs

b. 40 -50 Yrs

c. 50-60Yrs

2. Sex :

a. Male

b. Female

3. Education :

a. Illiterate

b. Primary education

c. Secondary education

d. Degree

SECTION – II

Zung Self-rating Anxiety Scale

Listed below are 20 statements. Please read each one carefully and then blacken the appropriate circle.

	None or a little of the time	**Some of the time**	**Good part of the time**	**Most or all of the time**
1. I feel more nervous and anxious than usual.				
2. I feel afraid for no reason at all.				
3. I get upset easily or feel panicky.				
4. I feel like I'm falling apart and going to pieces.				
5. I feel that everything is all right and nothing bad will happen.				
6. My arms and legs shake and tremble.				
7. I am bothered by headaches, neck and back pains.				
8. I feel weak and get tired easily.				
9. I feel calm and can sit still easily.				
10. I can feel my heart beating fast.				
11. I am bothered by dizzy spells.				
12. I have fainting spells or feel faint.				
13. I can breathe in and out easily.				
14. I get feelings of numbness and tingling in my fingers and toes.				
15. I am bothered by stomach aches or indigestion.				
16. I have to empty my bladder often.				
17. My hands are usually dry and warm.				
18. My face gets hot and blushes.				
19. I fall asleep easily and get a good night's rest.				

SECTION III

Beck Depression Inventory

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite)

1. Sadness

    0. I do not feel sad

    1. I feel sad much of the time

    2. I am sad all the time

    3. I am so sad or unhappy that I can't stand it

2. Pessimism

    0. I am not discouraged about my future

    1. I feel more discouraged about my future than I used to be

    2. I do not expect things to work out for me

    3. I feel my future is hopeless and will only get worse

3. Past Failure

    0. I do not feel like a failure

    1. I have failed more than I should have

    2. As I look back, I see a lot of failures

    3. I feel I am a total failure as a person

4. Loss of Pleasure

0. I get as much pleasure as I ever did from the things I enjoy

1 .I don’t enjoy things as much as I used to

2. I get very little pleasure from the things I used to enjoy

3. I can’t get any pleasure from the things I used to enjoy

5. Guilty Feelings

0. I don’t feel particularly guilty

1. I feel guilty over many things I have done or should have done

2. I feel quite guilty most of the time

3. I feel guilty all of the time

6. Punishment Feelings

0. I don’t feel I am being punished

1. I feel I may be punished

2. I expect to be punished

3. I feel I am being punished

7. Self-Dislike

0. I feel the same about myself as ever

1. I have lost confidence in myself

2. I am disappointed in myself

3. I dislike myself

8. Self-Criticalness

0. I don’t criticize or blame myself more than usual

1. I am more critical of myself than I used to be

2. I criticize myself for all of my faults

3. I blame myself for everything bad that happens

9. Suicidal Thoughts or Wishes

0. I don’t have any thoughts of killing myself

1. I have thoughts of killing myself, but I would not carry them out

2. I would like to kill myself

3. I would kill myself if I had the chance

10. Crying

0. I don’t cry anymore than I used to

1. I cry more than I used to

2. I cry over every little thing

3. I feel like crying, but I can’t

11. Agitation

0. I am no more restless or wound up than usual

1. I feel more restless or wound up than usual

2. I am so restless or agitated that it’s hard to stay still

3. I am so restless or agitated that I have to keep moving or doing something

12. Loss of Interest

0. I have not lost interest in other people or activities

1. I am less interested in other people or things than before

2. I have lost most of my interest in other people or things

3. It is hard to get interested in anything

13. Indecisiveness

0. I make decisions about as well as ever

1. I find it more difficult to make decisions than usual

2. I have much greater difficulty in making decisions than I used to

3. I have trouble making any decisions

14. Worthlessness

0. I do not feel I am worthless

1. I don't consider myself as worthwhile and useful as I used to

2. I feel more worthless as compared to other people

3. I feel utterly worthless

15. Loss of Energy

0. I have as much energy as ever

1 .I have less energy than I used to have

2. I don't have enough energy to do very much

3. I don't have enough energy to do anything

16. Changes in Sleeping Pattern

0. I have not experienced any change in my sleeping pattern

1a.I sleep somewhat more than usual

1b.I sleep somewhat less than usual

2a.I sleep a lot more than usual

2b.I sleep a lot less than usual

3a.I sleep most of the day

3b.I wake up 1-2 hours early and can't get back to sleep

17. Irritability

0. I am no more irritable than usual

1. I am more irritable than usual

2. I am much more irritable than usual

3. I am irritable all the time

18. Changes in Appetite

0. I have not experienced any change in my appetite

1a.My appetite is somewhat less than usual

1b.My appetite is somewhat greater than usual

2a.My appetite is much less than before

2b.My appetite is much greater than usual

3a.I have no appetite at all

3b.I crave food all the time

19. Concentration Difficulty

0. I can concentrate as well as ever

1. I can’t concentrate as well as usual

2. It is hard to keep my mind on anything for long

3. I find I can’t concentrate on anything

20. Tiredness or Fatigue

0. I am no more tired or fatigued than usual

1. I get more tired or fatigued more easily than usual

2. I am too tired or fatigued to do a lot of the things I used to do

3. I am too tired or fatigued to do most of the things I used to do

21. Loss of Interest in Sex

0. I have not noticed any recent change in my interest in sex

1. I am less interested in sex than I used to be

2. I am much less interested in sex now

3. I have lost interest in sex completely

பகுதி - I

தனி நபர் விபரம்

நோயாளிகளின் விபரம்

1.மாதிரி எண் :

2.வயது

அ 30-40 :

ஆ 40 – 50 :

இ 50-60 :

3.பாலினம்

அ ஆண் :

ஆ பெண் :

4.குடும்பம்

அ தனிக்குடும்பம் :

ஆ கூட்டுக்குடும்பம் :

5.கல்வி தகுதி

அ படிக்காதவர் :

ஆ தொடக்கக்கல்வி :

இ உயர் கல்வி :

ஈ பட்டப்படிப்பு :

6.தொழில்

அ குறைவான வேலை :

ஆ மிதமான வேலை :

இ கடினமானது :

7.மாத வருமானம்

அ வேலையின்மை :

ஆ 5000 க்கு குறைவு :

இ 5001 – 10000 :

ஈ 10001மேல் :

8.உடல்நிலை குறைவு ஏற்ப்படு வதற்க்கான கால அளவு

அ ஒரு வருடத்திற்க்கான குறைவாக :

ஆ 1-2 வருடம் :

இ 2 வருடத்திற்கு மேல் :

9.வேறு ஏதாவது உடல் நிலை கோளாறு

அ சக்கரை வியாதி :

ஆ அதிக இரத்த அழுத்தம் :

இ சக்கரை நோய் உடன் கூடிய இரத்த அழுத்தம் :

ஈ அதிக இரத்தக் கொழுப்பு :

கணவன் / மனைவி விபரம்

1.மாதிரி எண் :

2.வயது

அ 30-40 :

ஆ 40 – 50 :

இ 50-60 :

3.பாலினம்

அ ஆண் :

ஆ பெண் :

4. கல்வி தகுதி

அ படிக்காதவர் :

ஆ தொடக்கக்கல்வி :

இ உயர் கல்வி :

ஈ பட்டப்படிப்பு :

பகுதி - II

$ï';kdgg i jgg[gwwpa Ra ghpnrhj i d ms tL

fïnH cs;s midj;J thf;fpa';fs;y;vJ c';fSf;F bghUj;jkhd i j milahs Fwpapl;L fhl;Lf (my;yJ) c';fsJ fle;j fhy eltof;iffisak/ epfH;fhy eltof;iffisak;Fwpggpl Lf.

t. vz;		xdWkpy;iy (m) Fiwthd neuk	Vjht J xU neuk;	mjpfkhd neuk;	vgbghGJk
1	ehd;tHf;fkhf ,Ugg i j tpl mjpfeLf;fj;JlDk/gaj;JlDk; ,Ugg i j nghy;c z Ufpnwd;				
2.	ehd;fhuz kpy;yhky; gaggLtjhf c z Ufpnwd;				
3.	ehd;vspjpy;kd c isr;ry; milfpnwd;				
4.	ehd;kpf tpyfpr;bry;tjhftpk; c ile;Jnghtjhftpk; c zh;fpnwd;				
5.	vy;yh braYk;ey;ygoahf elggjhftpk;ve;j bfLjYk; VwglhJ vdWk;c z Ufpnwd;				
6.	vd;if/fhy;fs;gjwpwj;jhy; eL';FfpwJ.				
7.	ehd;j iytyp/fGj;Jtypkwpwk; KJFtypahy; ntj idailfpnwd;				
8.	ehd;vspjpy;nrhht ile;J gykpy;yhj Jnghy;c z Ufpnwd;				

9	ehd;mikjpahf cs;sjhftpk/ ve;jtpj gpurrpidapk;, y;yhky; ,Uggjhftpk;c zUfpnwd;				
10.	vdJ ,jak;mjpfkhf Joggij c zUfpnwd;				
11.	ehd;mof;fo jiy Rwwyhy; ghjpggilfpnwd;				
12.	vdf;F mof;fo kaf;fk(my;yJ) jiyrRwWtijnghy; ,Uf;fpwJ.				
13.	vd;dhy;vspjhf \r;ir cs;spGj;J btspapl Kofpwj.				
14.	vdJ if kwWk;fhy;tpuy;fs; czh;twW/ Ksf;F j;Jtjnghy ,Uggjhf czUfpnwd;				
15.	ehd;tapwW typahYk/ m$puznfhshwhYk; mtjpggLfpnwd;				
16.	vdf;F mof;fo rpWeph;fHpf;f ntzpapUf;fpwJ.				
17.	vdJ iffs;vgpbghGJk; fhape;Jk/ btJbtJgghftpk; ,Uf;Fk;				
18.	vdJ Kfk;mof;fo btggkhftpk;rpte;Jk;nghfpwJ.				
19.	vd;dhy;Rygkhf cw';ftpk/ MHpe;J cw';ftpk;Kofpwj.				
20.	vdf;F cwf;fj;jpy;ga';fukhd				

	fdt[fs;tUfpwJ.				

பகுதி - III

bgf;ogw;! d;, dbtd;lh

totikf;fggl;l nehf;fhzy;gotk;

cw;rhfkpd;ikiakjpggpLbraa[k;cgfuzk;

fPnH bfhLf;fggl;Ls;s tpdhf;fs; cw;rhfkpd;ikiag;gwwpait. ,jd; \yk; cw;rhfkpd;ikiag;gwwp vej;j mstpw;F mwpe;Js;sPh;fs;vdgijg;gwwp mwpe;J bfhs;s tpUkgf[fpdnwhk;vdnt fPH;f;fhqk;tpdhf;fis ed;F gojj;j gpdg[mjw;Fhpa gjpy;fis Fwpggpltk; c';fs;gjpy;fSk;c';fisg;gwwpa tputu';fSk;,ufrpakhf ghJfhf;fggLk; ,J cWjpahf Ma;tpw;F kl;LnkgadgLj;jggLk;vdW cWjpmsPf;fpnwhk;

FLkg tpstuk;

bgah; -

taJ -

ghypdk; - Mz;/bgz;

fy;tpj;jFjp -

bjhHpy; -

FLkgkhj tUkhdk; -

FLkgk; - TlLf;FLkgk;/jdpf;FLkgk;

1. **tUjjk;**
   0. ehd;tUj;jkhf ,y;iy.
   1. ehd;bgUkghyhd neu';fspy;tUj;jkhf csnsd;
   2. ehd;vgbghGJk;tUj;jkhd csnsd;
   3. vd;dhy; bghWj;Jfbfhs;s Koahj mstwF kpf tUj;jkhf tlk; renjh#kpdwpak;,Uf;fpnwd;

2. **ekgpf;ifapd;ik**
   0. ehd;vjph;fhyj;ijg;gwwp ftiy ,yyhky;csnsd;
   1. tHf;fj;ijtpl mjpfkhf vjph;fhyj;ijg;gwwpa ekgpf;ifapdwp csnsd;
   2. vyyh tp#a';fSk;vdf;F rhjfkhf elf;Fk;vdw vjphghhgg[vd;dplk;,y;iy.
   3. vd;Dila vjph;fhyk; ekgpf;ifawwjhftlk/ ,gbghGijtpl nkhrkhdjhfj;jhd;,Uf;Fk;vdWvz;q fpnwd;

3. **flej;jfhy njhy;tpgwwpavz;zk;**
   0. ehd;njhy;tpaile;jjhfepidf;ftpy;iy.
   1. ehd;,ijtpl mjpfnjhy;tpmile;jpUf;fntzLk;
   2. vd; thH;f;ifia gpdnehf;fp ghh;f;Fknghj ehd; njhy;tpiana mile;jpUf;fpnwd;
   3. ehd;xU KGj;njhy;tpa[wwkdpjdhfnt czh;fpnwd;

4. **kfpHrrpapd;ik**
   0. ,Jtiu vebje;j tp#a';fspy; renjh#j;ij milenjndh mnj khjph ,gbghGJk;renjh#j;ij mDgtpf;fpnwd;
   1. Kdgpue;jkhjph ,gbghGJ renjh#j;ij mDgtpf;f Kotjpy;iy.
   2. Kdgpue;jijtpl kpff;Fiwe;j msnt ,gbghGJ renjh#k;milfpnwd;
   3. vd;dhy;ve;j tp#aj;jpYk;renjh#k;mila Koatpy;iy.

5. **Fwpw czh;t[**
   0. Fwpggplkgoahf Fwpwvz;zk;VJk;,y;iy.
   1. ehd; bra;j gy fhhpa';fspYk/ bra;jpUf;f ntzpa gy fhhpa';fspYk; Fwpwkss;stdhf czh;fpnwd;
   2. ehd;mjpfneu';fspy;Fwpw czhrrpa[ld;,Uggjhf czh;fpnwd;
   3. ehd;vgbghGJk;Fwpw czhrrpa[ld;,Uggjhf czh;fpnwd;

6. jz;lid czh;t[

0. ehd;jzpf;fggLfpnwd;vdw vz;zk;vdf;F ,y;iy.
1. ehd;jzpf;fgglyhk;vdW epidf;fpnwd;
2. vdf;F jz;lid fpilf;Fk;vdW vjphghh;f;fpnwd;
3. ehd;jzpf;fggLfpnwd;vdW vz;q fpnwd;

7. RabtWgg[

0. vgbghGJk;nghynt vd;id g;gwwpehd;czh;fpnwd;
1. vdnky;cs;s ekgpf;if iaehd;,He;Jtplnld;
2. vdfnf vdkpJ Vkhwwkhf cs;sJ.
3. vdkpJ vdf;F btWgghf cs;sJ.

8. Ratpkhrdk;braj;jy;

0. ehd;tHf;fkhf vd;id Fiw TWt ijtpl mjpfkhf FiwTWtjpy;iy.
1. ehd; tHf;fkhf ,Ugg ijtpl mjpfkhf vd;Dila jtWfis tpkhrdk; bra;fpnwd;
2. vd;Dila vyyh jtWfisak;ehnd Fiw TWfpdnwd;
3. elf;ff;Toa vyyh jtWfSf;Fk;ehnd fhuzk;vdW epidf;fpnwd;

9. jwbfhiy vz;zk;(myyJ) tpUggk;

0. jwbfhiy braantz;Lk;vdw vz;zk;vdf;F ,y;iy.
1. jwbfhiy braak; vz;zk; vdf;F cs;sJ. Mdhy; ehd; mij braygLj;jkhlnld;
2. ehd;jwbfhiy bra;Jbfhs;s tpUkg[fpnwd;
3. re;jhggk;fpilj;jhy;ehd;jwbfhiy bra;Jbfhsntd;

10. mGJbfhzpUggJ

0. vgbghGJk;mGtijtpl mjpfkhf mGtjpy;iy.
1. tHf;fj;ijtpl mjpfkhf mGfpnwd;
2. ehd;vejr pdd tp#ajjpw;Fk;mGJtpLntd;
3. vdf;F mGfpdw vz;zk;tUfpwJ. Mdhy;vd;dhy;mHKoatpy;iy.

11. gjl;lkilt J

0. tHf;fj;ijtpl mjpfkhf ehd;gjl;lggLtJ ,y;iy.
1. tHf;fj;ijtpl mjpfkhf ehd;gjl;lkilfpnwd;
2. ehd;kpftpk;gjl;lkhf cs;nsd/;vd;dhy;mjpypUe;Jk‰sKoatpy;iy.
3. ehd; kpftpk; gjl;lkhf cs;sjhy; VnjDk; bray;fis bra;Jbfhzpuf;f ntzpa[s;sJ.

12. ehl;lkpd;ik

0. kwpwth;fspd;nky;cs;s <LghL Fiwatpy;iy.
1. kwpwth;fspd;nky;bfhz;Ls;s <LghL Kd;igtpl Fiwe;Js;sJ.
2. kwpwth;fspd;nky;cs;s <LghL mjpfmstpy;rpukggLfpnwd;
3. vd;dhy;vjpYk;<LghL fhl;Ltjw;F fodkhf cs;sJ.

13. jhkhdkpd;ik

0. ehd;vgbghGJk;edwhf Kobt Lgngd;
1. ehd;tHf;fj;ijtpl jhkhdk;vLggjpy;rpukggLfpnwd;
2. Kobt Lggjpy;tHf;fj;ijtpl kpftpk;mjpfmstpy;rpukggLfpnwd;
3. ve;j Kot[vLggjpYk;vdf;F kpFe;j rpukkhf ,Uf;fpdwJ.

14. kjpggpd;ik

0. ehd;kjpggwpwtd;vd;Wxunghjk;epidf;ftpy;iy.
1. ehd;vgbghGijatpk;nghy;vd;id kjpgg[s;stdhftpk/ cgnahfkhd tdhftpk; epidf;ftpy;iy.
2. ehd;kwpwth;fnshL vd;id xggpLknghJ kjpggwpwtdhf fUJfpnwd;
3. ehd;Kwpwpyk;kjpggwpwtdhf fUJfpnwd;

15. Mwpwypd;ik

0. vgbghGJknghy;vdf;F gyk;cs;sJ.
1. Kdg[cs;s ijtpl vdf;F gyk;Fiwthf cs;sJ.
2. rpwe;j Kiwapy;braygl vdf;F nghjpagyk;,y;iy.
3. ve;j braiyatpk;bra;tjw;F vdf;F nghJkhd gyk;,y;iy.

16. cwf;f Kiwapy;VwgLk;khWjy;fs;

0. vdJ cwf;fKiwapy;ve;j khWjiyatpk;ehd;c zutpy;iy.

1(m). tHf;fj;ijtpl ehd;rpwpJ mjpfkhf cw';fpnwd;

1(M). tHf;fj;ij tplehd;rpwpJ Fiwthf cw';Ffpnwd;

2(m). tHf;fj;ij tplehd;kpf mjpfkhf cw';Ffpnwd;

2(M). tHf;fj;ij tplehd;kpf Fiwthf cw';Ffpnwd;

3(m). ehd;jpdKk;kpf mjpfneuk; cw';Ffpnwd;

3(M). tHf;fkhf cs;s ij tpl 1 myyJ 2 kzpneuk; Kdghf vGe;J tpLfpnwd/ gpwF cwf;fk;tUtjpy;iy.

17. vhprryilj y;

0. ehd;tHf;fj;ij tpl mjpfkhf vhprryilt jpy;iy.
1. ehd;tHf;fj;ij tpl kpftk;mjpfkhf vhprryilfpnwd;
2. ehd;vgbghGJk;,Ugg ij tpl kpf mjpfkhf vhprryilfpnwd;
3. ehd;vyyhneu';fspYk;vhprryilfpnwd;

18. grpapy;VwgLk;khWjyfs;

0. vdJ grpapd;jd;ikapy;vejxUkhWjYk;,y;iy.

1(m). tHf;fj;ij tpl grpVwgLtJ Fiwe;Jss;sJ.

1(M). tHf;fj;ij tpl grpVwgLtJ mjpfkhf cs;sJ.

2(m). tHf;fj;ij tpl grpVwgLtJ mjpfkhf Fiwe;Jss;sJ.

2(M). tHf;fj;ij tpl grpVwgLtJ kpf mjpfkhf cs;sJ.

3(m). vdf;F Rj;jkhf grpVwgLtjpy;iy.

3(M). vdf;F vgbghGJk;rhggplntz;Lk;vdw;wc zh;t[,Uf;fpwJ.

19. ftdf;Fiwt[

0. vd;dhy;vgbghGJk;ftdkhf ,Uf;fKoak;
1. vd;dhy;vgbghGJk;nghy;ftdkhf ,Uf;fKoatpy;iy.
2. vd;dhy;vjpYk;epz;lneuk;ftdkhf ,UggJ rpukkhf cs;sJ.
3. vd;dhy;vjpYk;ftdk;brYj;jKoatpy;iy vdw;wc zh;fpnwd;

20. nrhh;tilj y;(myyJ) fisggilj y;

0. ehd;vgbghGJk;nghy;nrhh;tilahky;myyJ fisggilahky;,Uf;fpnwd;
1. ehd; vgbghGijak;tpl mjpfkhf vspjpy; nrhh;tilfpnwd; myyJ fisggilfpnwd;

2. ehd; mjpfkhf ntiy braypaqkbghGJ kpftqk; nrhh;tilfpnwd; myyJ fisggilfpnwd;
3. ehd; kpf mjpfkhf ntiybraypaqk; bghGJ kpftqk; nrhh;tilfpnwd; myyJ fisggilfpnwd;

21. clYwtpy;Mh;tkpy;iy

0. clYwtpy;vdJ Mh;tj;jpy;ve;j khwpwKk;rkgfhykhf Vwgltpy;iy.
1. Kd;igtpl clYwtpy;vdf;F tpUggk;F iwe;Jss;sJ.
2. vdf;F Kd;igtpl ,gbbghGJ clYwtpy;mjpfmst[ehl;lk;F iwe;Jss;sJ.
3. vdf;F KGtJkhf clYwtpy;,Ue;j ehl;lk;ngha;tpl;lJ.

REQISITION FOR CONTENT VALIDITY OF THE TOOL

From

II Year M.Sc. Nursing,

KMCH College of Nursing,

Coimbatore - 641014.

To

Through,

The Principal,

KMCH College of Nursing,

Coimbatore -641014.

Sub: Seeking Expert Opinion and Content Validity

Respected Madam,

I am the student of KMCH College of Nursing. As a part of partial fulfillment of my post graduate programme, I wish to undertake a study titled, **"A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING ON ANXIETY AND DEPRESSION AMONG PATIENTS SUBJECTED TO PTCA AND THEIR SPOUSES AT KMCH COIMBATORE".** It will be of immense help to me if you could persue the proposal and the research tool. Here with I am enclosing the copy of the same.

Kindly do the needful

Thanking You,

Place:

Date :

Yours obediently,

CERTIFICATION OF CONTENT VALIDITY

This is to certify I have evaluated the video submitted by Ms. Ashitha Chandran titled**“ A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEOASSISTED TEACHING ON ANXIETY AND DEPRESSION AMONG PATIENTS SUBJECTED TO PTCA AND THEIR SPOUSES AT KMCH COIMBATORE ”.**

I found that the video is appropriate.

Place :

Date :

Signature

CERTIFICATION OF CONTENT VALIDITY

This is to certify I have perused the research proposal submitted by Ms. Ashitha Chandran titled“ **A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEOASSISTED TEACHING ON ANXIETY AND DEPRESSION AMONG PATIENTS SUBJECTED TO PTCA AND THEIR SPOUSES AT KMCH COIMBATORE .”** I found that the methodology and instrument are appropriate.

Signature of the expert

SECTION VII

LIST OF EXPERTS

1. **DR. PROF. S. MADHAVI, M.Sc.(N).,Ph.D.,**
   Principal & H.O.D of Medical Surgical Nursing
   KMCH College Of Nursing
   Coimbatore – 641014

2. **Dr. K. CHOCKALINGAM,M.D., DM.,**
   Consultant and Interventional Cardiologist
   Kovai Medical Center and Hospital,
   Coimbatore – 14.

3. **DR. N. RAJENDIRAN., M.A. (App.Psy)., Ph.D.,**
   Professor in Psychology and Psychologist,
   Kovai Medical Center and Hospital,
   Coimbatore – 641014.

4. **PROF. K. BALASUBRAMANIAN, M.Sc. (N)**
   Department Of Medical Surgical Nursing,
   KMCH College of Nursing,
   Coimbatore – 641014.

5. **PROF. A. RAJA, M.Sc.(N).,**
   H.O.D of Medical Surgical Nursing
   Sahyadri College of Nursing
   Mangalore - 7

SECTION VIII

CONTENTS IN THE VIDEO

1) ANATOMY AND PHYSIOLOGY OF HEART

- CHAMBERS OF HEART
- CORONARY CIRCULATION

2) MEANING OF CORONARY ARTERY DISEASE

3) RISK FACTORS OF CORONAY ARTERY DISEASE

Non modifiable risk factors

- Age
- Gender
- Hereditary

Modifiable risk factors

- Cigarette smoking
- Hypertension
- Diabetes mellitus
- Elevated serum cholesterol
- Physical inactivity
- Stress

4) PATHOPHYSIOLOGY

5) TREATMENT MODALITIES

- Fibrinolytic therapy
- Cholestrol lowering agents
- Antiplatlet therapy
- Percutaneous Transluminal Angioplasty (PTCA)
- Surgical management (CABG)

6) PTCA PROCEDURE

7) PREPARATION ON THE PREVIOUS DAY OF THE PROCEDURE

- Skin preparation
- Investigations

8) PREPARATION ON THE DAY OF THE PROCEDURE

- Get consent
- Starvation

- Dentures and nail polish will be removed.
- Intravenous access
- Vital signs will be checked
- Notify regarding allergic history

9) DURING THE PROCEDURE

- Positioning and vascular access to catheterisation
- Stenting procedure
- Normal effects due to dye injection
- Warning signs

10) CARE AFTER PTCA & SHEATH REMOVAL

- Position
- Fluid intake
- Post procedural instructions

11) COMPLICATIONS

12) LIFESTYLE MODIFICATIONS

- Exercise
- Dietary restrictions
- Stress management
- Regular check up

ஒளி நாடாவில் பதிவு செய்யப்பட்ட குறிப்புகள்

1) இருதயத்தின் அமைப்பு மற்றும் செயல் பாடுகள்

- இருதயத்தின் அறைகள்
- இருதயத்தின் இரத்த ஓட்டம்

2. இருதய இரத்தக் குழாயின் நோயின் வரையறை

3. இருதய இரத்தக்குழாய் நோயின் காரணிகள்

மாற்ற இயலாத காரணிகள்

- வயது
- இனம்
- பரம்பரை

மாற்றக்கூடிய காரணிகள்

- புகைப்பிடித்தல்
- உயர் ரத்த அழுத்தம்
- சர்க்கரை நோய்
- ரத்தத்தில் அதிக கொழுப்பு படிதல்
- உடற் பயிற்சியின்மை
- மன அழுத்தம்

4. நோய் உருவாகும் முறை

5. சிகிச்சை முறைகள்

- இரத்த கட்டிகளை உடைக்கும் மருந்துகள்

- கொழுப்பினை குறைக்கும் மருந்துகள்
- ஆண்டிபிளேட்லெட் சிகிச்சை முறை
- இரத்தக் குலை அடைப்பினை நீக்குதல்
- இருதய அறுவை சிகிச்சை

6. இரத்தக் குழாய் அடைப்பினை நீக்கும் செய்முறை

7. அடைப்பு சிகிச்சை செய்வதற்கு முன் தயார்படுத்த வேண்டியவை

- தோல் தயார்படுத்துதல்
- பரிசோதனைகள்

8. செய்முறை செய்கின்ற நாளில் தயார் படுத்துதல்

- செயல்முறையப் பற்றி அறிவித்து கையொப்பம் வாங்குதல்

  வாய்வழியாக உணவு எடுத்தாதிருத்தல்

- செயற்கை பற்கள் மற்றும் நெயில் பாலிஷை அகற்றுதல்

- நரம்பு ஊசி செலுத்துதல்
- உடலின் வெப்பநிலை , நாடித்துடிப்பு , சுவாசம் மற்றும் இரத்த அழுத்தத்தை

  கண்காணித்தல்
- ஒவ்வாமை இருப்பதை தெரிவித்தல்

9. செய்முறை செய்யும்பொழுது

- நிலை மற்றும் இரத்தக் குழாயின் வழியாக செலுத்துதல்
- ஸ்டென்ட் செலுத்துதல்
- சாயம் செலுத்துவதால் ஏற்ப்படும் விளைவுகள்
- எச்சரிக்கை அறிகுறிகள்

10. செய்முறை மற்றும் ஷித்தை எடுத்த பின் கவனிக்க வேண்டியவை

- நிலை
- நீர் பருகுதல்
- செய்முறை முடிந்தபின் பின்பற்ற வேண்டிய கருத்துக்கள்

11. பின் விளைவுகள்

12. வாழ்க்கை முறையை மாற்றுதல்

- உடற்ப்பயிற்சி
- உணவு கட்டுப்பாடு
- மன அழுத்த திற்கான தீர்வு முறைகள்
- தொடர் பரிசோதனை